e-Front runners

MICREX-SX series
SPH
USER'S MANUAL

WEB Module <Type: NP1L-WE1>

FEH258

Preface

Thank you for purchasing Fuji Electric Programmable Controller MICREX-SX Series.
This User's Manual describes the specifications of the WEB module (type:NP1L-WE1) for the MICREX-SX series.
Read this manual carefully to ensure correct operation. When using modules or peripheral devices, be sure to read the corresponding user's manual listed below.

Title	Manual No.	Contents
User's Manual Instructions, MICREX-SX series SPH	FEH200	Explains the system configuration, the memory and the language of SPH.
User's Manual Hardware, MICREX-SX series SPH	FEH201	Explains the system configuration, the specifications and operations of modules in the MICREX-SX series.
Guide, MICREX-SX series	FEH253-1	Self-study guide to understand basic use of MICREX-SX.
Redundant System Constructions Guide, MICREX-SX series	FEH253-2	Explains the method of MICREX-SX redundancy system to Improve system reliability.
ST Language Guide, MICREX-SX series	FEH253-3	Self-study guide for high-level language (ST language) used for FA.
User's Manual D300win <Reference>, MICREX-SX series SPH	FEH254	Explains the installation procedure, functions and operations of D300winV2.
User's Manual D300win <Reference>, MICREX-SX series SPH	FEH257	Explains the installation procedure, functions and operations of D300winV3.

* In addition to the above manuals, the following Fuji Electric FA Components & Systems Co., Ltd. site offers various manuals and technical documents associated with MICREX-SX.
URL http://www.fujielectric.co.jp/fcs/eng/

Notes

1. This manual may not be reproduced in whole or part in any form without prior written approval by the manufacturer.
2. The contents of this manual (including specifications) are subject to change without prior notice.
3. If you find any ambiguous or incorrect descriptions in this manual, please write them down (along with the manual No. shown on the cover) and contact FUJI.

Safety Precautions

Be sure to read the "Safety Precautions" thoroughly before using the module.
Here, the safety precautions items are classified into "Warning" and "Caution".

Warning : Incorrect handling of the device may result in death or serious injury.

Caution : Incorrect handling of the device may result in minor injury or physical damage.

Even some items indicated by "Caution" may result in a serious accident.
Both safety instruction categories provide important information. Be sure to strictly observe these instructions.

Warning

- ❑ Never touch any part of charged circuits as terminals and exposed metal portion while the power is turned ON. It may result in an electric shock to the operator.
- ❑ Turn OFF the power before mounting, dismounting, wiring, maintaining or checking, otherwise, electric shock, erratic operation or troubles might occur.
- ❑ Place the emergency stop circuit, interlock circuit or the like for safety outside the PC. A failure of PC might break or cause problems to the machine.
- ❑ Do not connect in reverse polarity, charge (except rechargeable ones), disassemble, heat, deform, throw in a fire or short-circuit the batteries, otherwise, they might burst or take fire.
- ❑ If batteries have any deformation, spilled fluids, or other abnormality, do not use them. The use of such batteries might cause explosion or firing.

Safety Precautions

⚠ Caution

- ❑ Do not use one found damaged or deformed when unpacked, otherwise, fire, failure or erratic operation might be caused.
- ❑ Do not shock the product by dropping or tipping it over, otherwise, it might be damaged or troubled.
- ❑ Follow the directions of the operating instructions when mounting the product.
  If mounting is improper, the product might drop or develop problems or erratic operations.
- ❑ Use the rated voltage and current mentioned in the operating instructions and manual. Use beyond the rated values might cause fire, erratic operation or failure.
- ❑ Operate (keep) in the environment specified in the operating instructions and manual. High temperature, high humidity, condensation, dust, corrosive gases, oil, organic solvents, excessive vibration or shock, might cause electric shock, fire, erratic operation or failure.
- ❑ Select a wire size to suit the applied voltage and carrying current. Tighten the wire terminals to the specified torque. Inappropriate wiring or tightening might cause fire, malfunction, failure or might cause the product to drop from its mounting.
- ❑ Contaminants, wiring chips, iron powder or other foreign matter must not enter the device when installing it, otherwise, fire, accident, erratic operation or failure might occur.
- ❑ Remove the dust-cover seals of modules after wiring, otherwise, fire, accident, erratic operation or failure might occur.
- ❑ Connect the ground terminal to the ground, otherwise, electric shock or erratic operation might occur.
- ❑ Periodically make sure the terminal screws and mounting screws are securely tightened.
  Operation at a loosened status might cause fire or erratic operation.
- ❑ Put the furnished connector covers on unused connectors, otherwise, erratic operation or failure might occur.
- ❑ Put the furnished terminal covers on the terminal blocks, otherwise, electric shock or fire might occur.
- ❑ Sufficiently make sure of safety before program change, forced output, starting, stopping or anything else during a run. Wrong operation might break or cause problems to the machine
- ❑ Engage the loader connector in a correct orientation, otherwise, an erratic operation might occur.
- ❑ Before touching the PC, discharge any static electricity that may have been collected on your body. To discharge it, touch a grounded metallic object. Static electricity might cause erratic operation or failure.
- ❑ Be sure to install the electrical wiring correctly and securely, observing the directions of the operating instructions and manual. Wrong or loose wiring might cause fire, accident or failure.
- ❑ When disengaging the plug from the outlet, do not pull the cord, otherwise, break of cable might cause fire or failure.
- ❑ Do not attempt to change system configurations (such as installing or removing I/O modules) while the power is ON, otherwise, erratic operation or failure might occur.
- ❑ Do not attempt to repair the module by yourself, but contact your Fuji Electric agent. When replacing the batteries, correctly and securely connect the battery connectors, otherwise, fire, accident or failure might occur.
- ❑ Do not remodel or disassemble the product, otherwise, failure might occur.
- ❑ Follow the regulations of industrial wastes when the device is to be discarded.
- ❑ The modules covered in these operating instructions have not been designed or manufactured for use in equipment or systems which, in the event of failure, can lead to loss of human life.
- ❑ If you intend to use the modules covered in these operating instructions for special applications, such as for nuclear energy control, aerospace, medical or transportation, please consult your Fuji Electric agent.
- ❑ Be sure to provide protective measures when using the module covered in these operating instructions in equipment which, in the event of failure, can lead to loss of human life or other grade results.
- ❑ External power supply (such as 24 V DC power supply) which is connected to DC I/O should be strongly isolated from AC power supply, otherwise, accident or failure might occur. (Use of EN60950 conforming power supply is recommended.)

Revision

*The manual No. is printed at the bottom right of the cover of this manual.

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Section 1 General

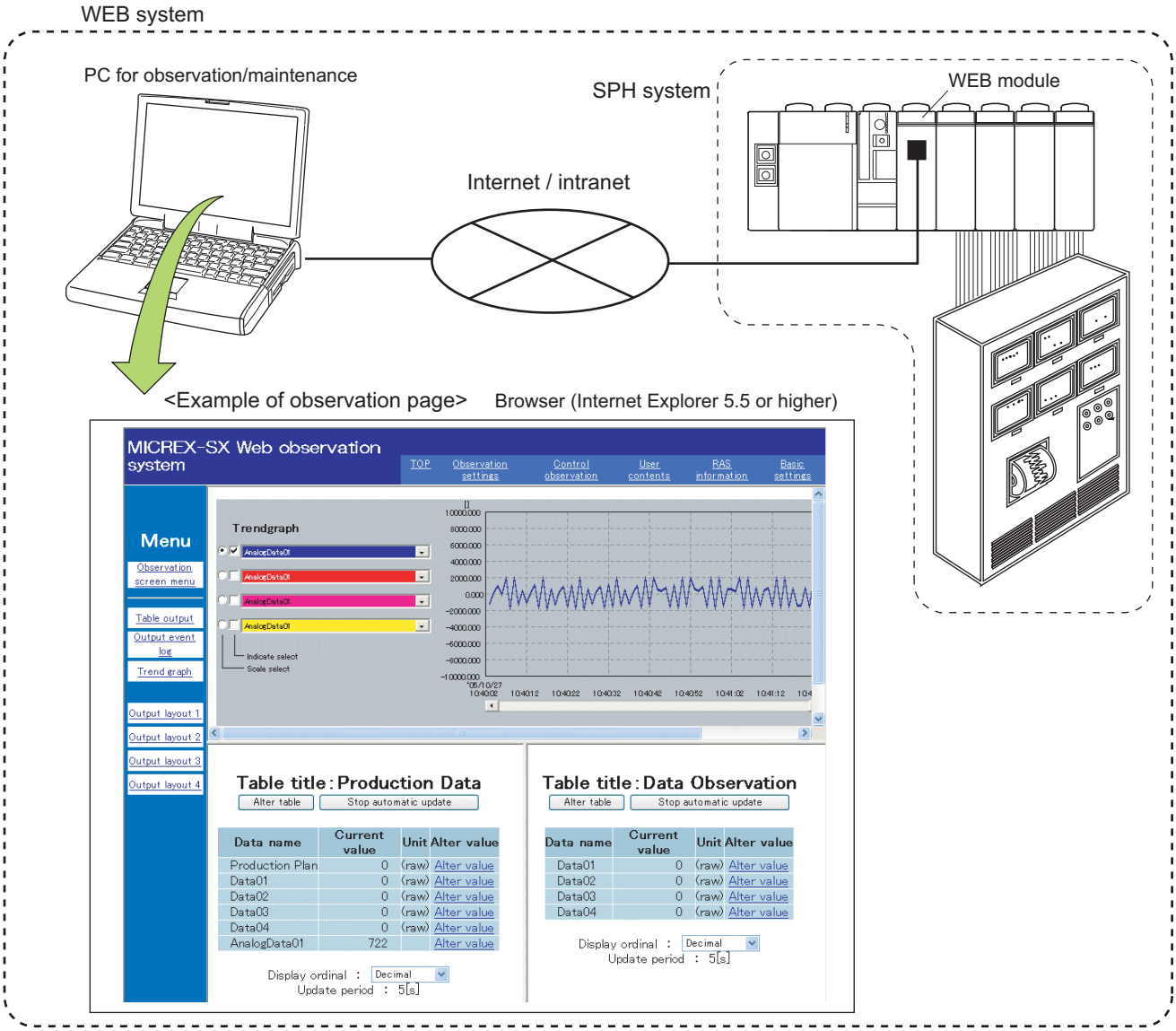
WEB module (type: NP1L-WE1) is an Internet communication module that is mounted on the base board of the MICREX-SX series (connected to the SX bus). With the WEB module, you can observe data in the PLC module and receive mails via the Internet or intranet.

1-1 Overview of Functions

The WEB module has the following functions:
1) WEB observation function: You can observe the PLC system and the data, and perform data settings with a browser.
2) E-mail sending function: E-mails can be sent to specified cellular phones and personal computers.
3) Controller data transmission function: Data in the SPH_CPU can be transmitted to the FTP server.
4) Remote loader function: Via the Internet/intranet, the remote operation of the loader is possible.
5) User-created WEB page function: For the PLC system observation, data observation and data setting, you can use your original pages.

1-1-1 WEB observation function

- You can display data in the SPH_CPU in tabular form, trend graph form, or event log form in a browser of a personal computer for observation/maintenance and observe it.
- You can write data into the data in the SPH_CPU from a browser.
- Data of an event log can be downloaded to the personal computer in “CVS file format”.
- You can perform basic settings and add or change observation data from the personal computer for observation/maintenance.

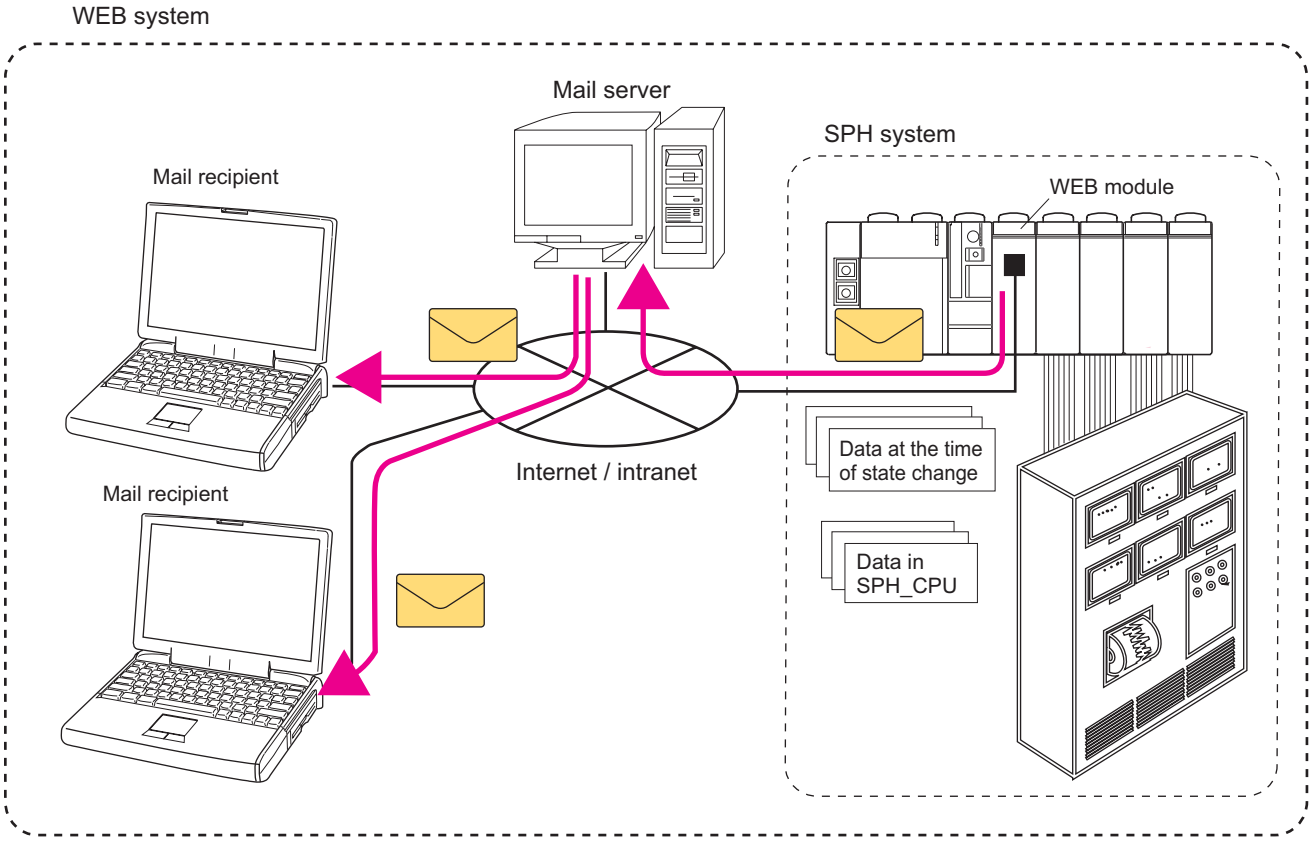


Section 1 General

1-1 Overview of Functions

1-1-2 E-mail sending function

On conditions that state of data in SX_CPU changes or a specified controller event or timer event occurs, an e-mail can be sent to the set e-mail addresses (personal computer, cellular phone, and PHS).



*1 The controller event uses bit data in the SPH_CPU as an event. The timer event uses a timer value (1s to 100000s) set in the WEB module as an event.

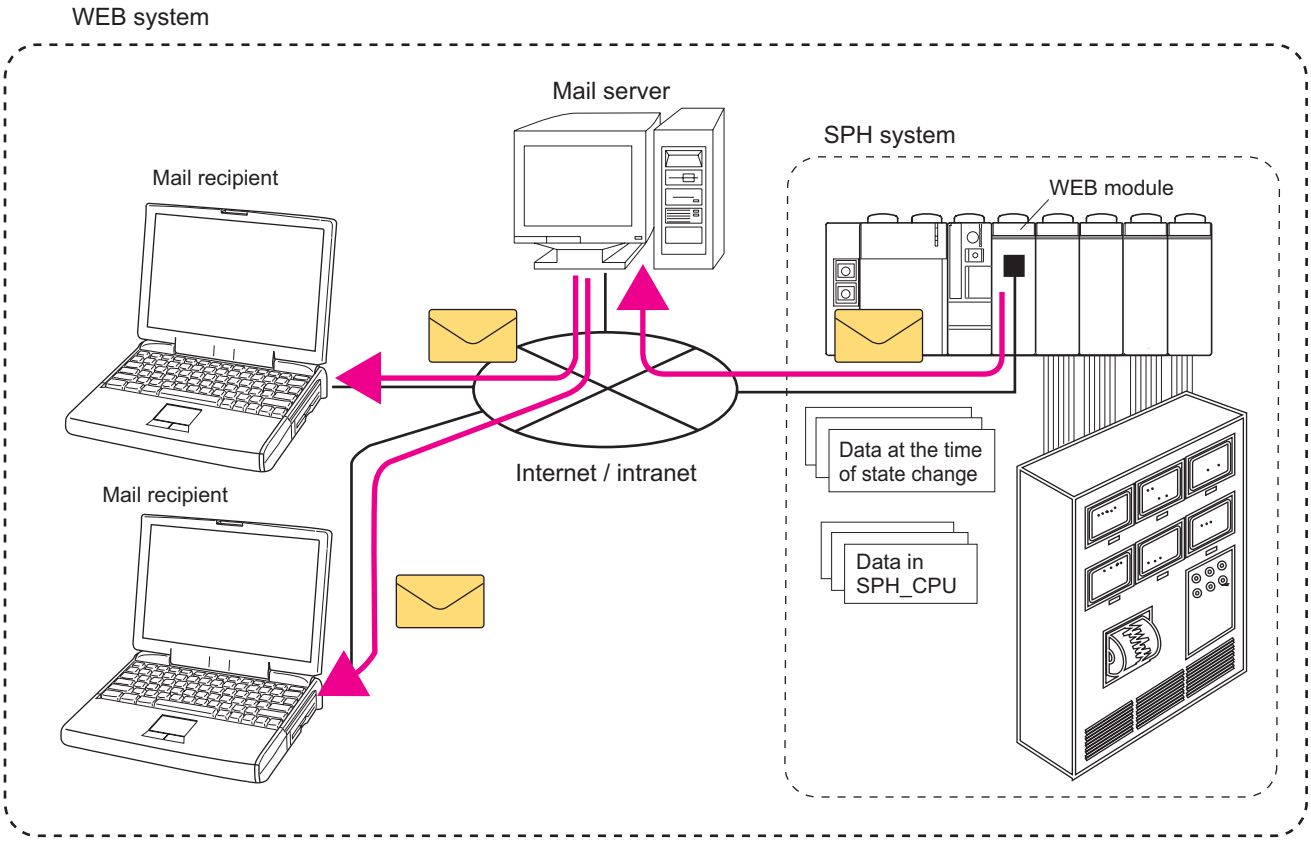
*2 Mail server to be used
- For intranet: Use a mail server on the intranet.
- For Internet: Use a mail server provided by a provider.

Section 1 General

1-1 Overview of Functions

1-1-3 Controller data transmission function

Data in the SPH_CPU can be transmitted to a specified FTP server.



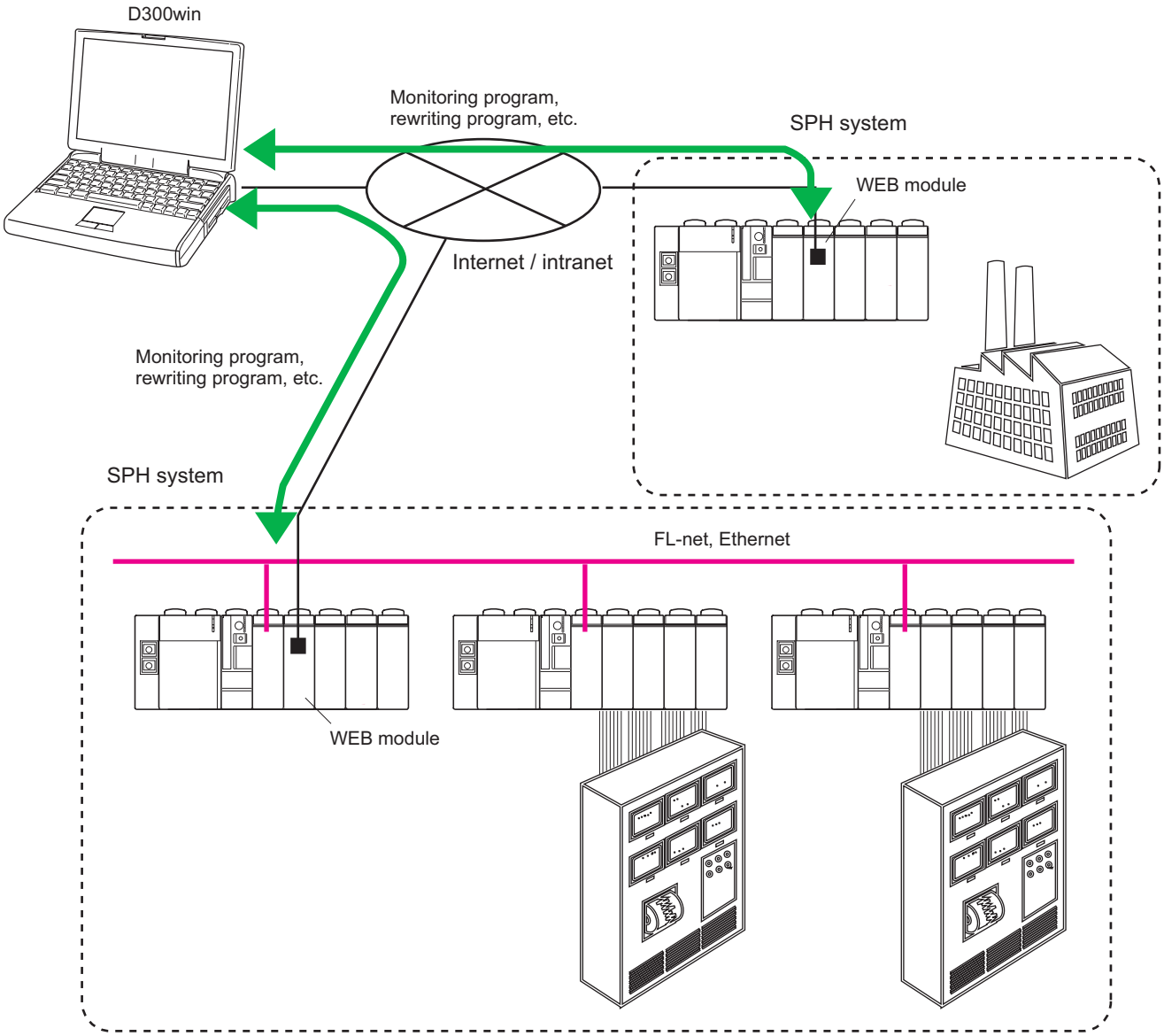
* Files to be transmitted to FTP server
- Data file (binary format)
- Status file (text format)

Section 1 General

1-1 Overview of Functions

1-1-4 Remote loader function

Via the Internet/intranet, the remote operation of the loader is possible. You can use the same loader functions that are available when the loader is directly connected to the loader connector of the CPU module.



Section 1 General

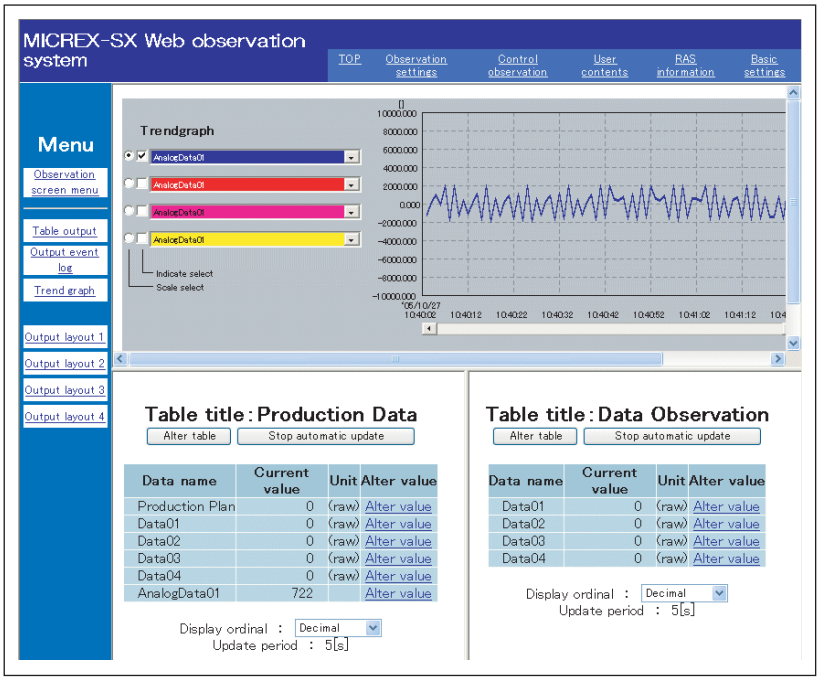
1-1 Overview of Functions

1-1-5 User-created observation page function

You can download web pages that you have created with a commercially available homepage creating tool. On the original observation page, you can observe the PLC system and data, and perform data setting.

<Example of normal page>

Browser (Internet Explorer 5.5 or higher)

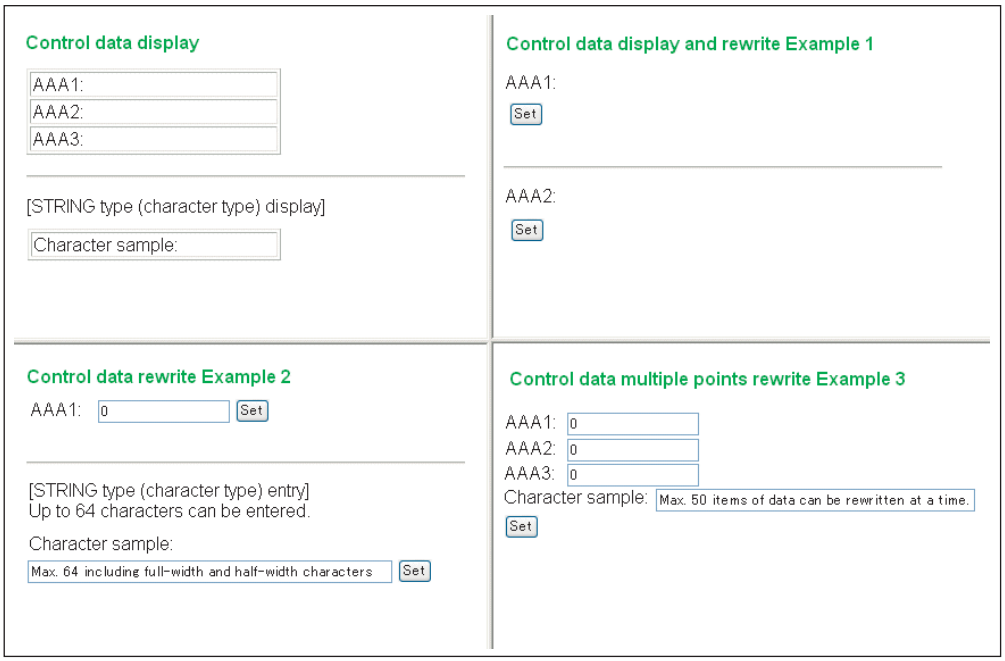


PC for observation/ maintenance

The screen can be changed over.

<Example of user-created page>

Browser (Internet Explorer 5.5 or higher)


Control data display
AAA1:
AAA2:
AAA3:
[STRING type (character type) display]
Character sample:
Control data display and rewrite Example 1
Set
Control data rewrite Example 2
[STRING type (character type) entry]
Up to 64 characters can be entered.
Max. 64 including full-width and half-width characters
Control data multiple points rewrite Example 3
Max. 50 items of data can be rewritten at a time.

* For instructions on how to create user original pages, refer to “MICREX-SX How-to Guide How to create user web pages for WEB module.”

Section 1 General

1-2 Special Notes

- **Be sure to take notes of your settings.**
  Some setting items of this module (administrator data setup, etc.) cannot be reset to the factory defaults by users for reasons of security. If you lose the setting contents, factory default settings can be restored in Fuji factory. This service is available on a chargeable basis.
- **Do not power the SPH system off while settings are being written into the WEB module; a failure may occur in the module or the SPH system may be stopped in a fatal fault state.**
- **Each setting must be uploaded (from the setting page in a browser into the WEB module) in the following order:**
  1) Controller data settings
  2) Mail address settings
  3) Change-state settings
  4) Table output settings
  5) Trend settings
  6) Controller memory transmission settings
  7) SX-WEB system settings

1-3 Supported Versions

When configuring a system using a WEB module, use the following version of the loader:
- D300winV3: available in all versions
- D300winV2: V2.2.3.1 or later

Section 2 Specifications

2-1 General Specifications

Item		Specification
Physical environmental conditions	Operating ambient temperature	0 to +55℃
	Storage temperature	-25 to 70℃
	Relative humidity	20 to 95%RH, no condensation
	Pollution degree	2, no condensation
	Corrosion immunity	Free from corrosive gases. Not stained with organic solvents
	Operating altitude	2000 m or less above sea level Transport condition: 70 kPa (equivalent to 3000 m above sea level) or more
Mechanical service conditions	Vibration	Half amplitude: 0.15 mm, Constant acceleration: 19.6 m/s^2
	Shock	Peak acceleration: 147 m/s^2 (3 cycles in each direction)
Electrical service conditions	Noise immunity	Rise time 1 ns, pulse width 1 μs, 1.5 kV (noise simulator)
	Electrostatic discharge	Contact discharge: ±6kV, Aerial discharge: ±8kV (Class 3 of IEC 61000-4-2)
	Radioelectromagnetic field	80 MHz to 1000 MHz: 10 V/m (Class 3 of IEC 61000-4-3)
Isolation method		Not isolated
Dielectric strength		-
Insulation resistance		-
Number of occupied slots		1
Internal current consumption		24V DC, 80 mA or less (supplied from the power module via the base board)
Installation conditions	Structure	Panel built in type, IP30
	Cooling method	Natural air cooled
	Mass	Approx. 140g
	Outside dimensions	W35 x H105 x D90 mm

Section 2 Specifications

2-2 Interface Specifications

Setting	Specification
Ethernet	10BASE-T/100BASE-TX (RJ45 modular jack x 1) Auto-negotiation
RS232C (for PPP connection)	Max. 115200bps (D-sub 9-pin (male) connector x 1) Character format Data length: 7/8 bits (selectable) Parity: even number/odd number/none (selectable) Stop bit: 1 bit/2 bits (selectable) Hard flow control: available (selectable)

2-3 End Personal Computer Operating Environments

Operating environments required for a personal computer to be used for the WEB observation system are shown below.

Item	Specification
Personal computer	IBM-AT compatible equipment, NEC PC98 series
CPU	Intel Pentium 400MHz or higher is recommended. *When WindowsXP is used, 800MHz or higher is recommended.
Memory capacity	64MB or more *When WindowsXP is used, 256MB or more is recommended.
Communication interface	Ethernet
Keyboard	Japanese 106-key (A01) keyboard (Ctrl + alphanumeric)
Display	Resolution: 800 x 600 dots (1024 x 768 dots or more is recommended.)
Operating system	Windows95 Japanese or English Edition
	Windows98SE Japanese or English Edition
	WindowsME Japanese or English Edition
	WindowsNT V4.0 Japanese or English Edition
	Windows2000 Japanese or English Edition
	WindowsXP Japanese or English Edition
Other software	Internet Explorer 5.5 or up

Section 2 Specifications

2-4 Functional Specifications

The WEB module has the following functions:
- WEB observation function
- E-mail sending function
- Controller data transmission function
- Remote loader function
- User-created observation page function
- RAS information function

2-4-1 WEB observation function

In a browser of a personal computer, data in the SPH_CPU can be displayed in tabular form, graphic form and event log form and observed.

Function		Description
Table	Number of displayable tables	Max. 2 *Displayed tables can be switched with browser operation.
	Number of registrable tables	Max. 20 Up to 20 items of the controller data can be registered for one table.
	Update period	5s (default), 10s
	Data setting function	Displayed values of controller data can be rewritten with browser operation.
Trend graph	Number of displayable trend graphs	1 * Up to four items of trend data can be displayed on a graph. In addition, displayed trend data can be switched with browser operation.
	Number of registrable trend graphs	Max. 32
	Update period	Registered controller data update period
Change-state observation	Data in the SPH_CPU are observed. When the data reachs a specified value, the date and time and the value of the data at the time are stored as an event log in the WEB module.	
	Stored event log	Max. 1000 * Event log data can be downloaded with browser operation.

* Controller data means data in the SPH_CPU that is registered in the WEB module.
  You can manage the data in the SPH_CPU under whatever name you please.

2-4-2 E-mail sending function

If an event registered as the e-mail sending condition occurs, an e-mail is sent to e-mail addresses registered in the WEB module in advance.
There are two types of e-mail send: sending an e-mail to notify you of a state change in the data in the SPH_CPU, and sending data in the SPH_CPU as an e-mail attachment.

Function	Description
Number of registrable mail addresses	Max. 16 groups Up to 16 addresses can be registered for one group.
Number of registrable mail servers	1
Mail send type	• Sending an e-mail to notify the user of a state change in data in the SPH_CPU ⇨ Register in the "Change-state settings". • Sending data in the SPH_CPU as an e-mail attachment ⇨ Register in the "Controller memory transmission settings".
Mail type	Mail can be set for each "Change-state settings" and "Controller memory transmission settings". "Change-state settings" ⇨ 32, "Controller memory transmission settings" ⇨ 8

Note: The function of sending data in the SPH_CPU as an e-mail attachment is supported by V2033 or later version of this module.

Section 2 Specifications

2-4 Functional Specifications

2-4-3 Controller data transmission function

This function transmits data in the SPH_CPU to FTP server previously designated.

Function	Description
Number of registrable pieces of controller data	Max. 8 pieces
Max. number of words to be transferred	Max. 4096 words
Event (transfer condition)	• Timer event ⇨ Timer event specified in the this module: 32 (1s to 100000s) • Timer controller event ⇨ Bit data in the SPH_CPU: 32 bits
Transferable SPH_CPU data	M1: Standard memory M3: Retain memory M10: System memory
Number of settable FTP server	1

2-4-4 Remote loader function

D300win is connected via the Internet.

Function	Description
Number of connectable loaders	Up to 4 loaders can be simultaneously connected.
Settable port No.	507 to 65533

2-4-5 User-created observation page function

With this function, users can download web pages created with a commercially available homepage creating tool. It is possible to observe the PLC system and data, and perform data setting on the original observation page.

Function	Description
Total size of user web pages	Max. 1MB
User web page creating tool	Commercially available homepage creating tool or text editor * For using a text editor, knowledge of HTML is required.
Other tool	A converting tool is required to convert a created page and transfer it to this module. Download the converting tool from"Technical Information" section of Fuji website.

2-4-6 RAS information function

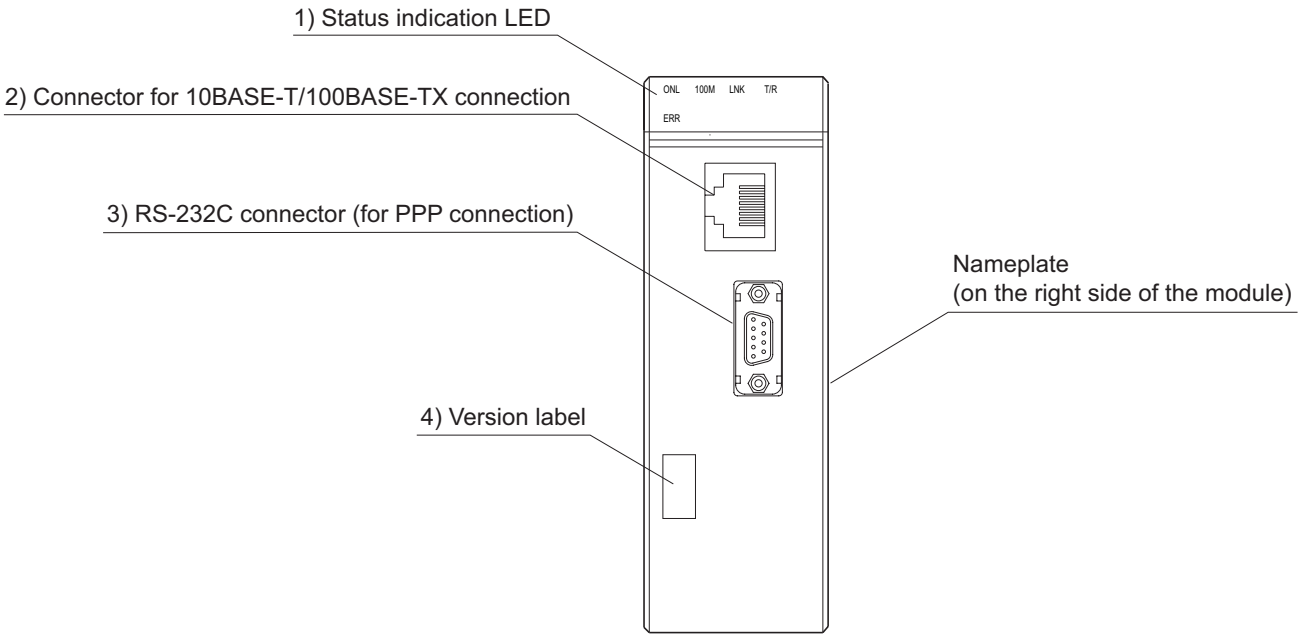
The status of the CPU of the SPH_CPU system, the version information and network information of the WEB module, etc. are displayed.

Function	Description
CPU behavior information	Displays the statuses of the CPUs in the SPH system.
Version number information	Displays the sortware version of the WEB module.
Network information	Displays the MAC address, host name, domain name, and IP address of the WEB module.
Warning information	Displays warning information, such as an error occurred while retrieving controller data or sending mails, that have been detected by the module.
Module RAS information	Displays the status of the WEB module detected by itself.

Section 2 Specifications

2-5 Names and Functions

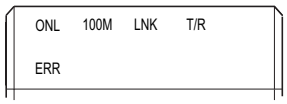
2-5-1 Names



2-5-2 Functions

1) Status indication LED

These LEDs indicate the status of the WEB module.



Symbol	Color	Lighting condition
ONL	Green	Lights when this module is operating normally; Blinks when SX bus is being connected; Unlit when SX bus is abnormal.
ERR	Red	Lights when this module is abnormal (module internal hardware error) or a cause of fatal fault is detected by software.
100M	Green	Lights when communicating in 100BASE-TX; Unlit: when communicating in 10BASE-T
LINK	Green	Indicates the status of Ethernet connection. Lights when connecting to Ethernet.
T/R	Green	Indicates the status of data transmission. Lights when a send/receive packet occurs.

2) Connector for 10BASE-T/100BASE-TX connection

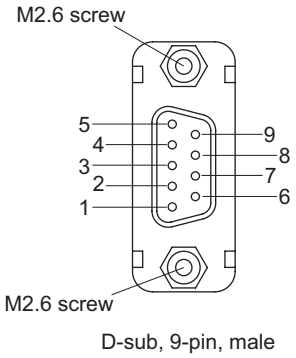
Use a communication cable of 10BASE-T or 100BASE-TX.

Section 2 Specifications

2-5 Names and Functions

3) RS232C connector (for PPP connection)

This connector is used for observing the SX system or sending data via a cellular phone, PHS, or telephone line.

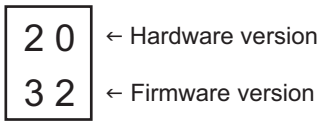


D-sub, 9-pin, male

Pin No.	Signal name	Function	Direction of signal WEB - External device
1	CD	Career detection	←
2	RD	Receive data	←
3	SD	Send data	→
4	ER	Data end ready	→
5	GND		-
6	DR	Data set ready	←
7	RS	Send request	→
8	CS	Send ready	←
9	CI		←

4) Version label

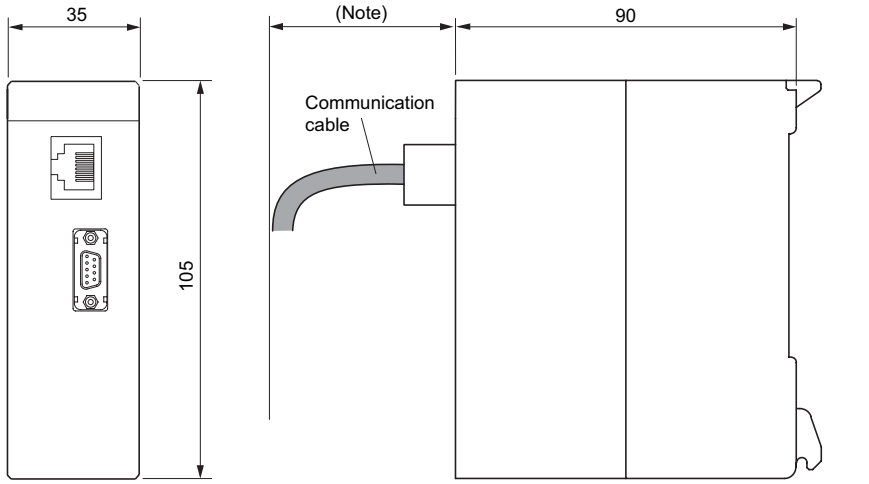
Versions of the hardware and firmware of the WEB module are indicated.



Section 2 Specifications

2-6 Dimensions

Unit: mm



Note: When performing installation and wiring work, the bending radius of the cable needs to be taken into consideration.

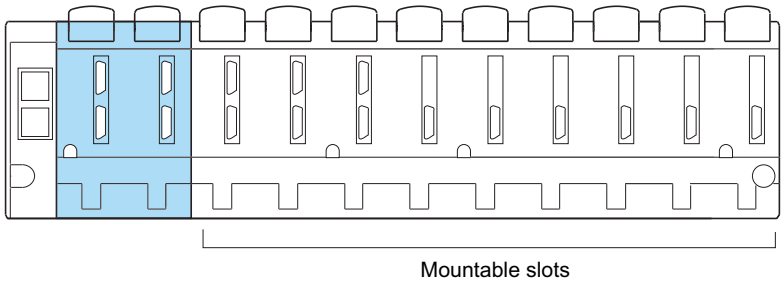
Section 3 System Configuration

3-1 Limits on Mounting

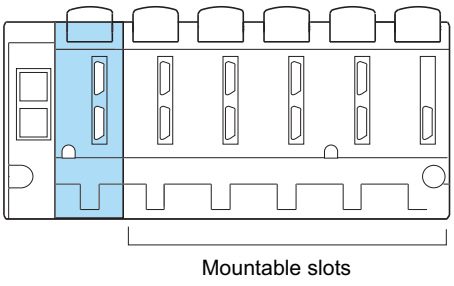
3-1-1 Mounting position

WEB module (type: NP1L-WE1) can be mounted at any location on the base board that is directly connected to the SX bus of the MICREX-SX series. However, the WEB module cannot be mounted on the base board of a remote I/O, such as OPCN-1, DeviceNet and T-link.

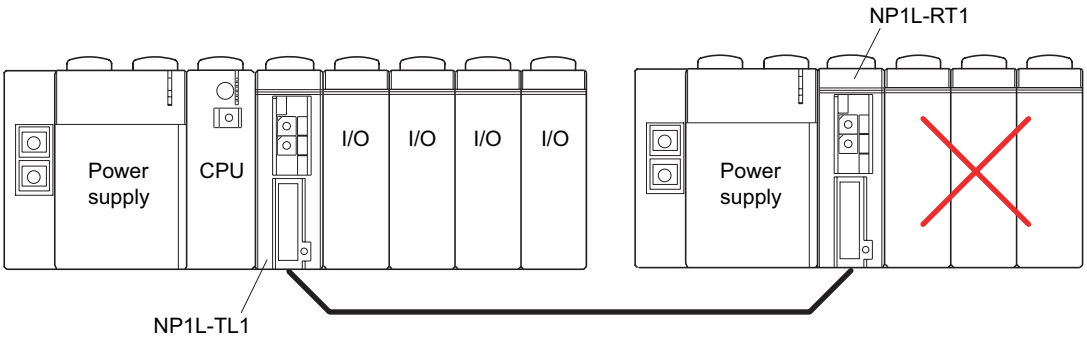
<Base board other than 3 or 6-slot base board>



<3 or 6-slot base board>



Note: WEB module cannot be mounted on T-link, OPCN-1 or other slave station base board.



Section 3 System Configuration

3-1 Limits on Mounting

3-1-2 Number of mountable modules

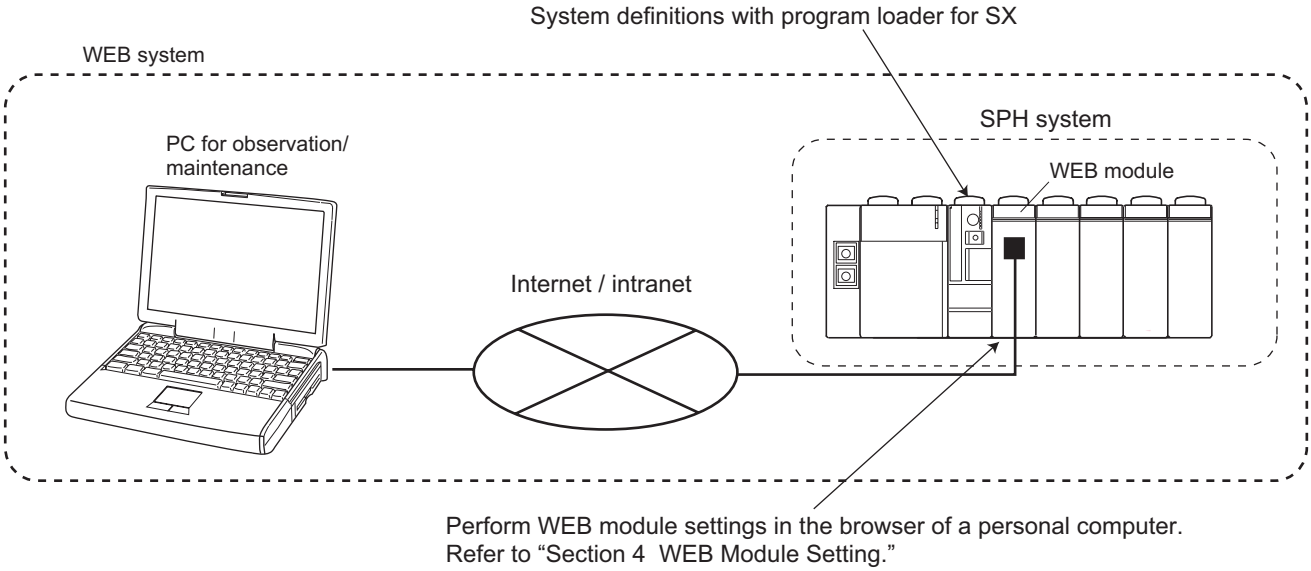
Maximum four WEB modules can be connected for one configuration. However, when the modules listed below are connected to the same configuration, the system must be configured such that the total number of WEB modules and the following modules becomes 16 or less.

Name	Type
P-link module	NP1L-PL1
PE-link module	NP1L-PE1
FL-net module	NP1L-FL1/FL2
LE-net loop module	NP1L-LL1/LL2
LE-net module	NP1L-LE1
General purpose communication module	NP1L-RS1/RS2/RS4
PC card interface module	NP1L-PC2
Memory card interface module	NP1L-MM1
ADS-net module	NP1L-AD1
Ethernet module	NP1L-ET1/ET2
LONWORKS interface module	NP1L-LW1
POD directly connected to SX bus	-

Section 3 System Configuration

3-2 System Configuration

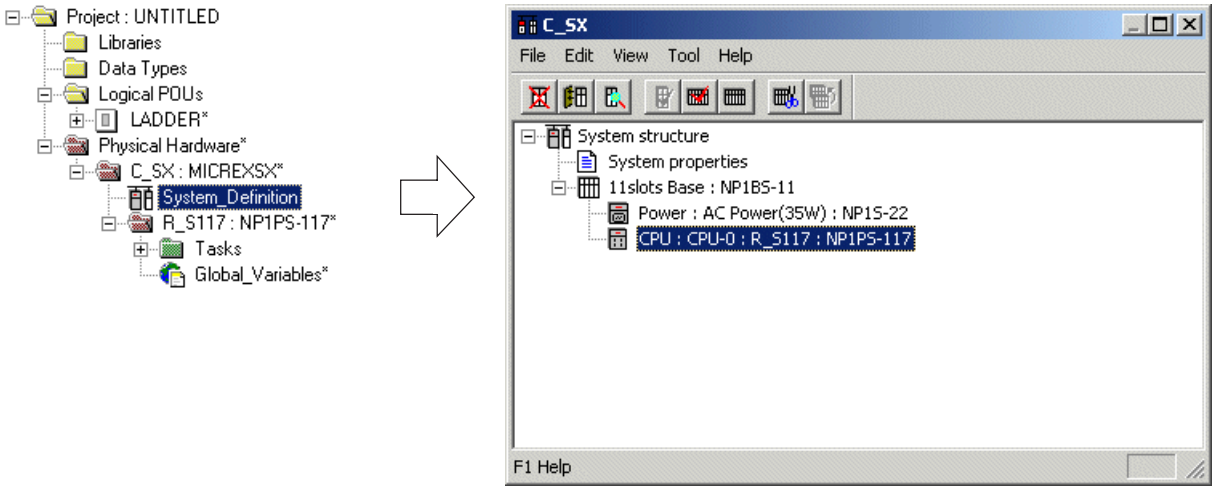
3-2-1 Example of system configuration


System definitions with program loader for SX
WEB system
SPH system
PC for observation/
maintenance
WEB module
Internet / intranet
Perform WEB module settings in the browser of a personal computer.
Refer to “Section 4 WEB Module Setting.”

3-2-2 System configuration definition

<Setting procedure>

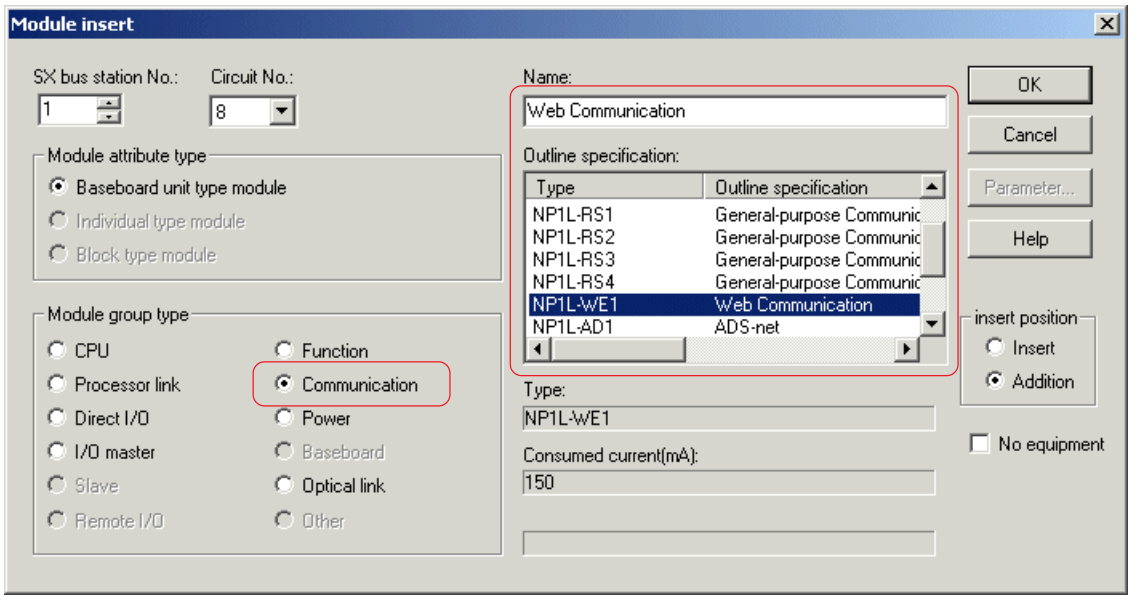
◆ Double-click “System_Definition” in the project tree to display the system configuration registration screen.



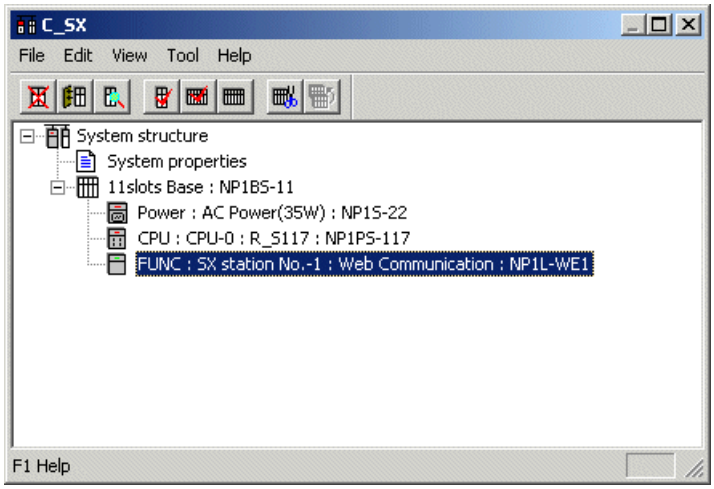
Section 3 System Configuration

3-2 System Configuration

◆ When the WEB module is registered below the CPU module, select the CPU module and then click the [Insert] button. The module insert" dialog appears. Select "Communication" for the module group type and then "NP1L-WE1" from the outline specification box.



◆ Click the [OK] button to register the WEB module.



◆ Register other modules according to the actual system configuration.

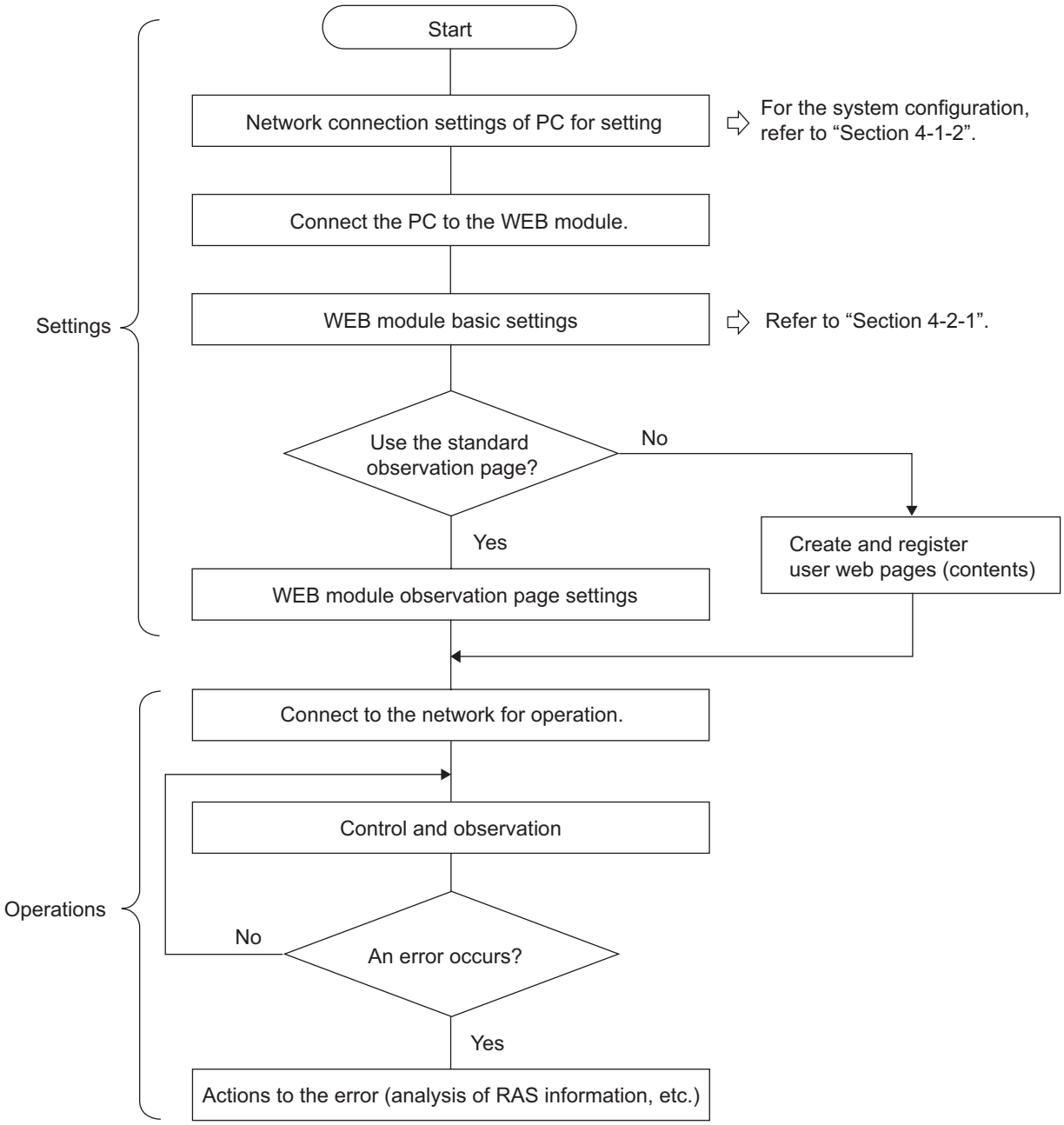
*** The WEB module is classified as "common module" that does not occupy input/output area. Therefore, it is not necessary to perform "I/O group setting" and "Fail-soft setting".**

◆ Compile and download the project, and then reset the SPH system to start up the system. For information about each setting of the WEB module, refer to "Section 4 WEB Module Setting".

Section 4 WEB Module Setting

4-1 Overview of Operations

4-1-1 Flowchart from basic setting to operation



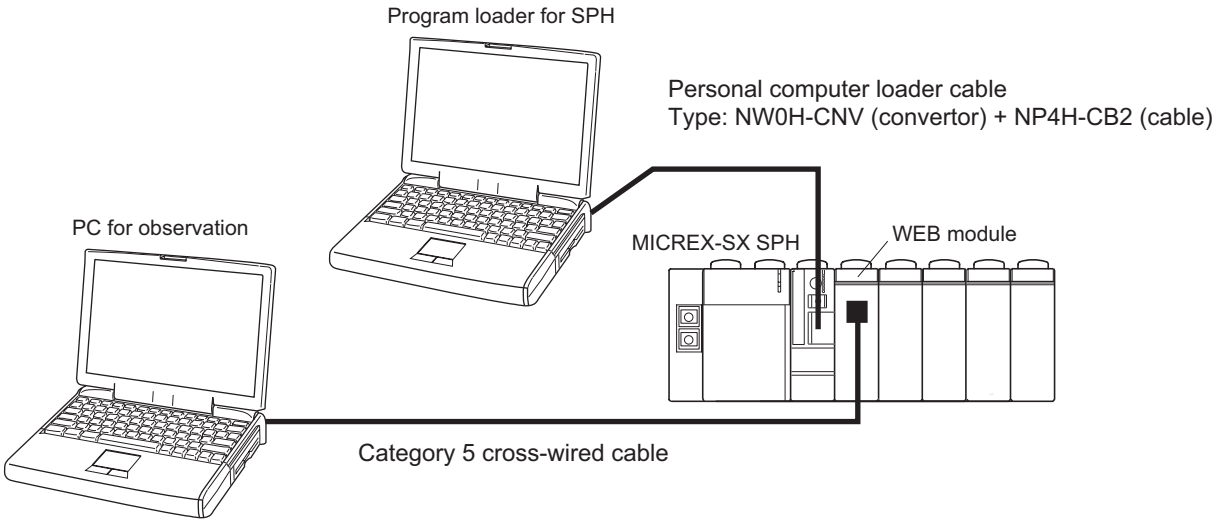
Section 4 WEB Module Setting

4-1 Operations Overview

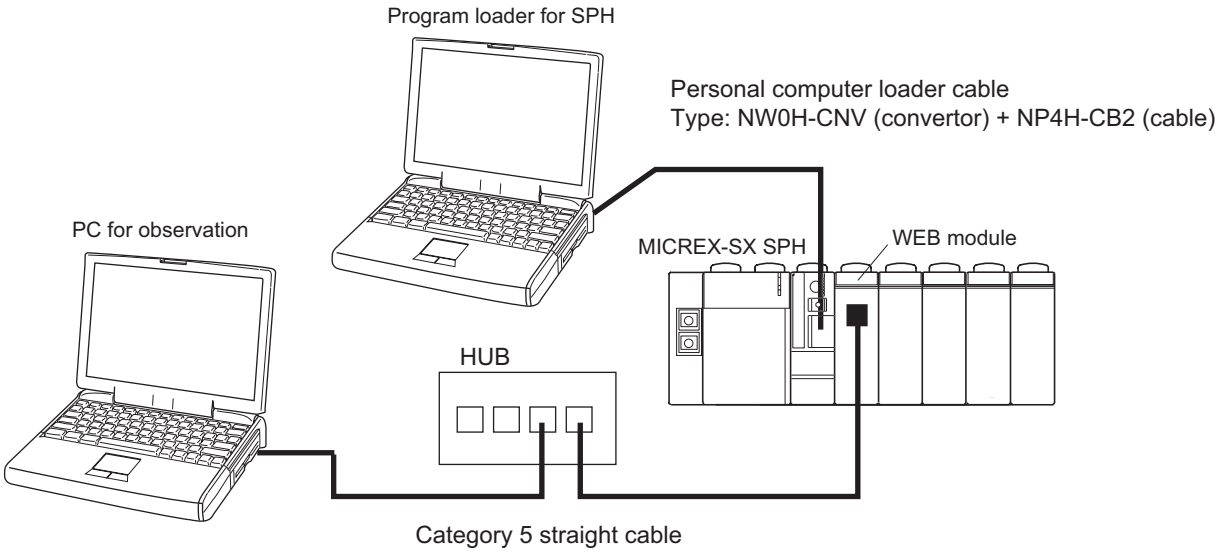
4-1-2 System configuration for setting

Settings of the WEB module are performed in a browser of a personal computer. Prepare a system shown below.

<Example of system configuration for initial setting (1)>



<Example of system configuration for initial setting (2)>



* The program loader for SPH is required to start up the SPH system including the WEB module.
  For information about the system definition, refer to “Section 3 System Configuration”.

Note 1: When connecting a personal computer to the WEB module as shown in “Example of system configuration for initial setting (1)”, use category 5 cross-wired cables.
Note 2: When using a hub as shown in “Example of system configuration for initial setting (2)”, use a hub with an uplink to which nothing is connected. For the LAN cable, use category 5 straight cables.
Note 3: Use a personal computer with Internet Explorer (IE5.5 or higher) installed.

Section 4 WEB Module Setting

4-2 Basic Settings

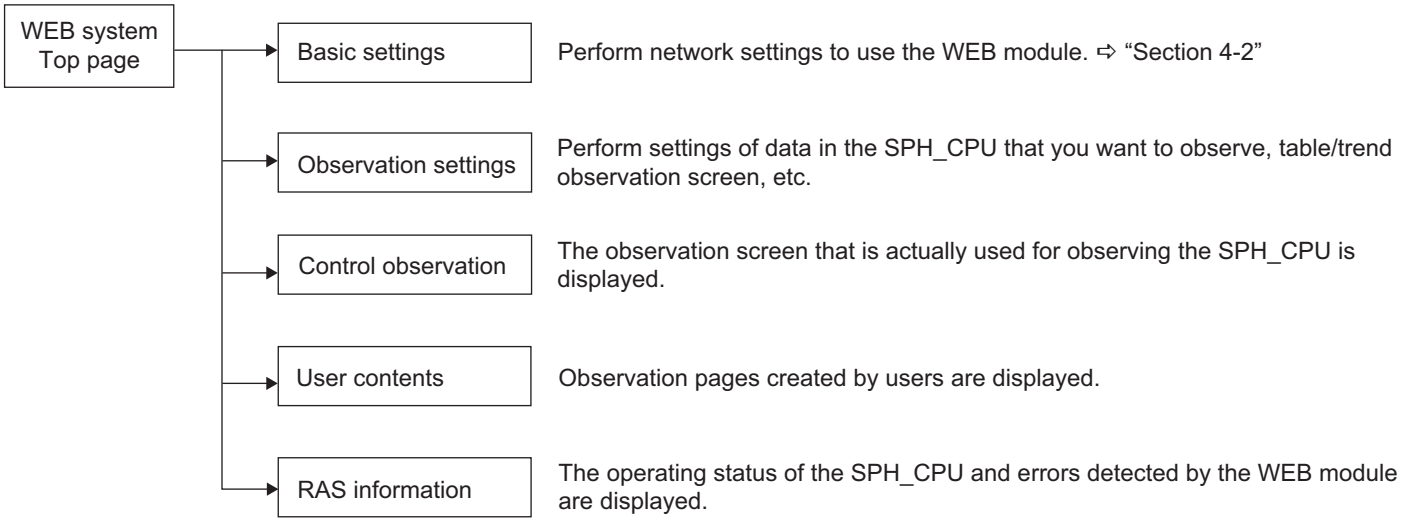
WEB module settings are performed on the “WEB observation system” page provided in the WEB module.

4-2-1 Basic settings

- ◆ Connect a personal computer for observation to the WEB module as shown in the examples of system configuration shown in “Section 4-1-2”.
- ◆ Then, activate a browser of the personal computer and access an address “http://192.168.0.1”. The top page of “WEB observation system” is displayed.

Note: Set the IP address of the personal computer at “192.168.0.*” (subnet mask: 255.255.255.0).

The structure of the top page of the WEB observation system is as follows:

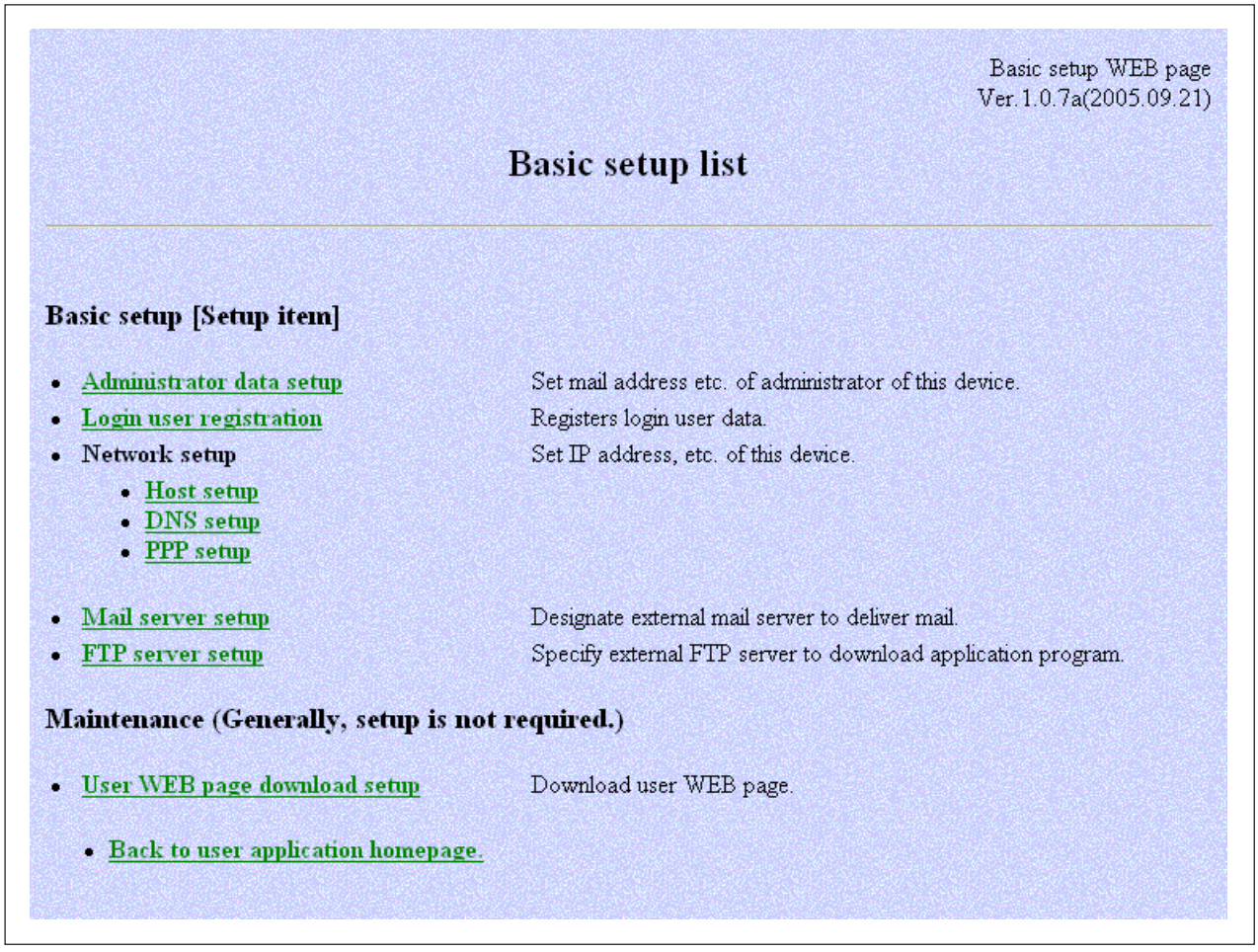

WEB system Top page
Basic settings
Perform network settings to use the WEB module. ⇨ “Section 4-2”
Observation settings
Perform settings of data in the SPH_CPU that you want to observe, table/trend observation screen, etc.
Control observation
The observation screen that is actually used for observing the SPH_CPU is displayed.
User contents
Observation pages created by users are displayed.
RAS information
The operating status of the SPH_CPU and errors detected by the WEB module are displayed.

Section 4 WEB Module Setting

4-2 Basic Settings

◆ Clink the [Basic settings] on the top page of WEB observation system to display the “Basic setup list” page.
When using for the first time, ignore the user name and pasword entry page and click the [OK] button. The “Basic setup list” page is displayed.

Note: Once the administrator information is set, you will need to enter the set user name (administrator log-in ID) and password here.
If you failed to enter them three times in a row, this screen disappears and reset is required.


Basic setup WEB page
Ver.1.0.7a(2005.09.21)
Basic setup list
Basic setup [Setup item]
Administrator data setup
Set mail address etc. of administrator of this device.
Login user registration
Registers login user data.
Network setup
Set IP address, etc. of this device.
Host setup
DNS setup
PPP setup
Mail server setup
Designate external mail server to deliver mail.
FTP server setup
Specify external FTP server to download application program.
Maintenance (Generally, setup is not required.)
User WEB page download setup
Download user WEB page.
Back to user application homepage.

Section 4 WEB Module Setting

4-2 Basic Settings

<Basic setup list>

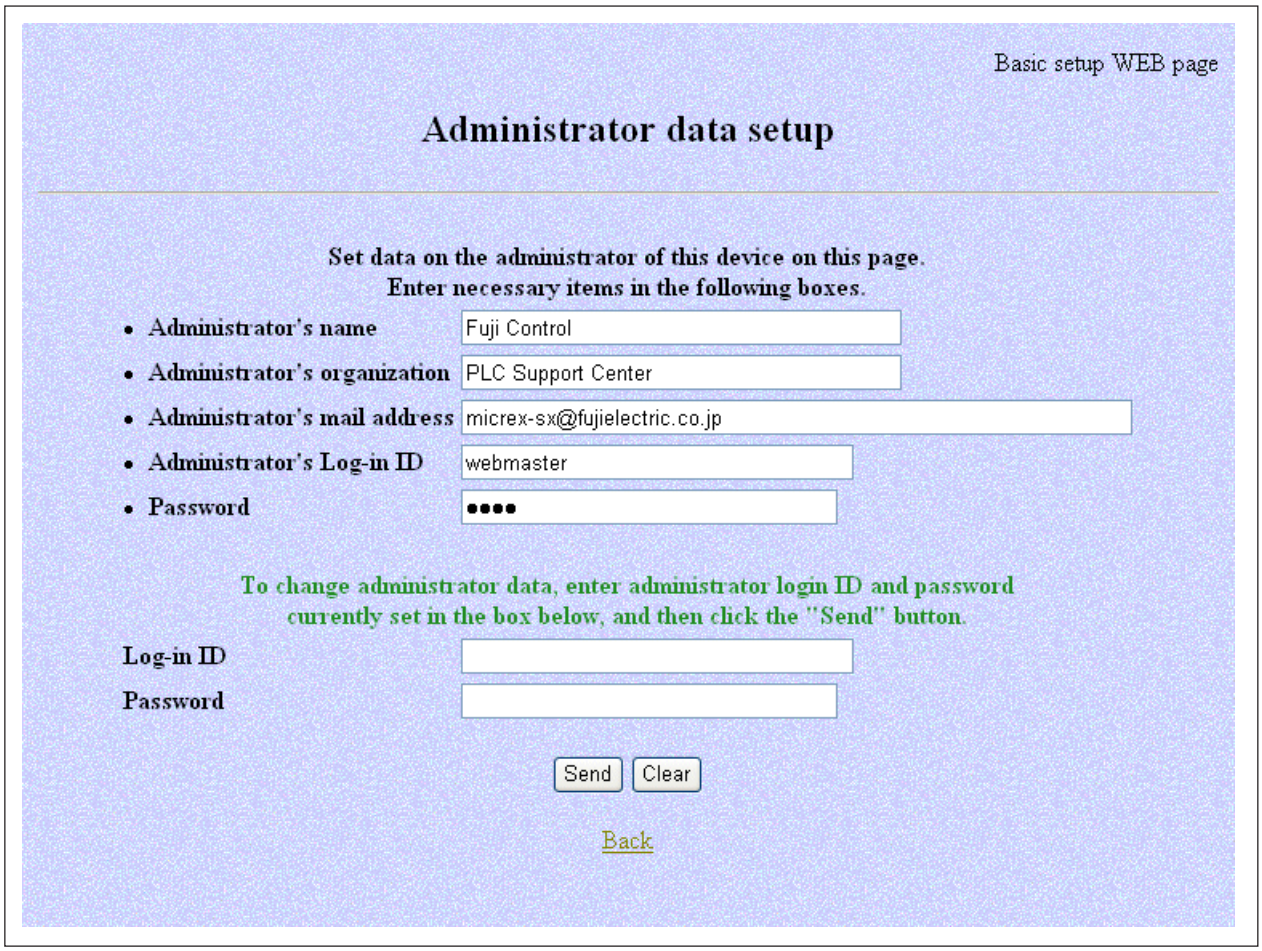
Setup item		Overview
Basic setting	Administrator data setup	Set data about the administrator of this WEB observation system. Once this item is set, only the user registered here can log into the "Basic setup list" page.
	Login user registration	Set login ID and password of users who access this WEB observation system. Priority setting for limiting each operation or setting is available. Once this item is set, only the administrator and users registered here can access this WEB observation system.
	Network setup -Host setup	Perform network settings of the WEB module. (IP address, subnet mask, etc.)
	Network setup -DNS setup	When obtaining an IP address of the connected device by using DNS server, set data about DNS server to which the WEB module is connected.
	Network setup -PPP setup	Perform PPP settings. PPP is supported by V2033 or later.
	Mail server setup	When using the mail server function of the WEB module, set the necessary items.
	FTP server setup	When using FTP server, set the necessary items. Normally, this setting is not required.
Maintenance	User WEB page download setup	This setting is used to download user-created contents (observation page, etc.) to the WEB module.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-2 Administrator data setup

◆ Click the [Administrator data setup] on the “Basic setup list” page to display the “Administrator data setup” page.

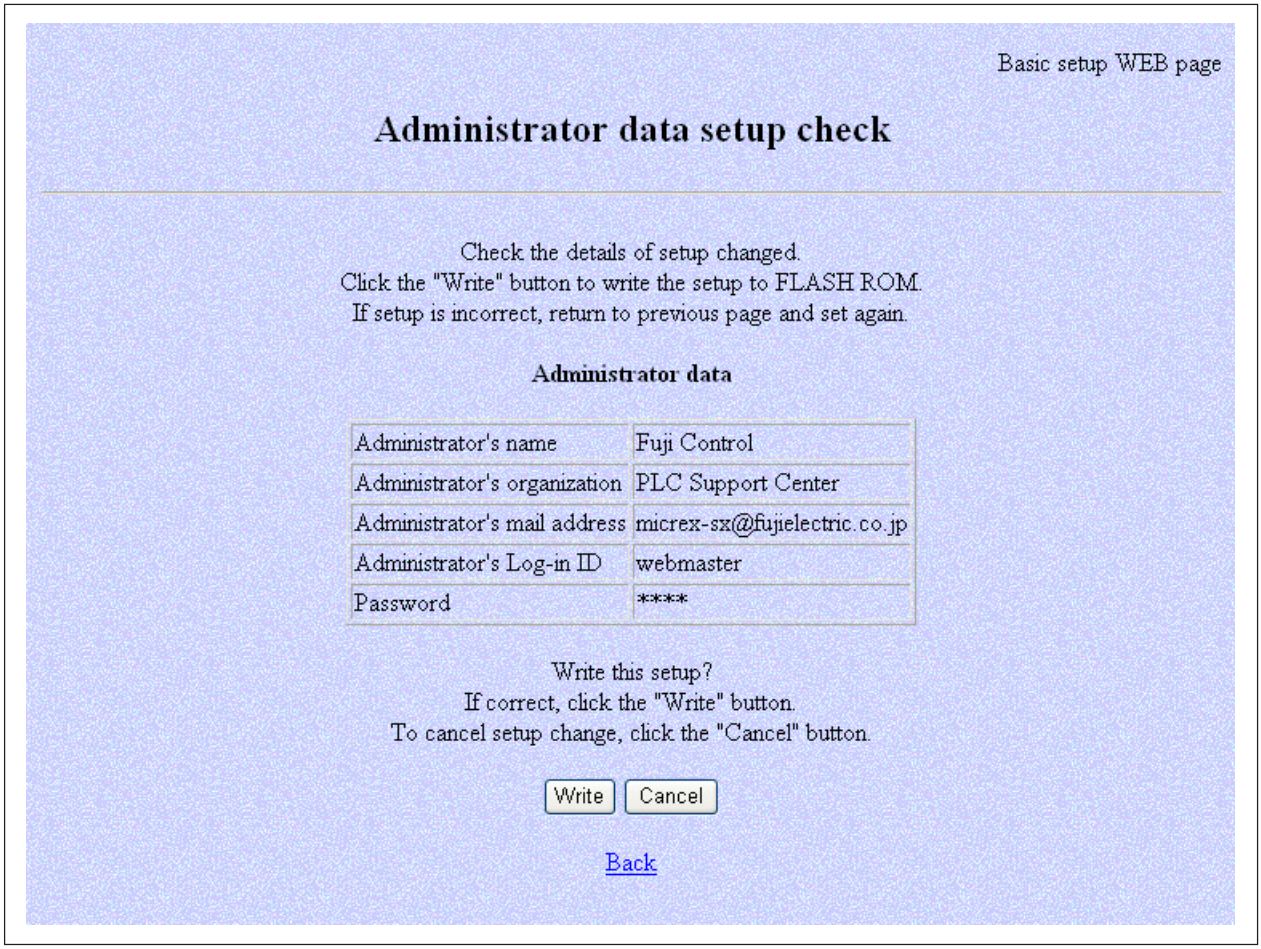


Setting item	Description	Number of characters to enter
Administrator's name	Set the name of the administrator.	Max. 39 half-width characters
Administrator's organization	Set the oraganization to which the administrator belongs.	Max. 39 half-width characters
Administrator's mail address	Set the mail address of the administrator.	Max. 31 half-width characters
Administrator's Log-in ID	Set a log-in ID that permits access to the "Basic setup list" page.	Max. 31 half-width characters
Password	Set a password that permits access to the "Basic setup list" page.	Max. 31 half-width characters

Section 4 WEB Module Setting

4-2 Basic Settings

◆ After setting administrator data, click the [Send] button to display the “Administrator data setup check” page. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed. Clicking the [Cancel] button stops writing.



* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

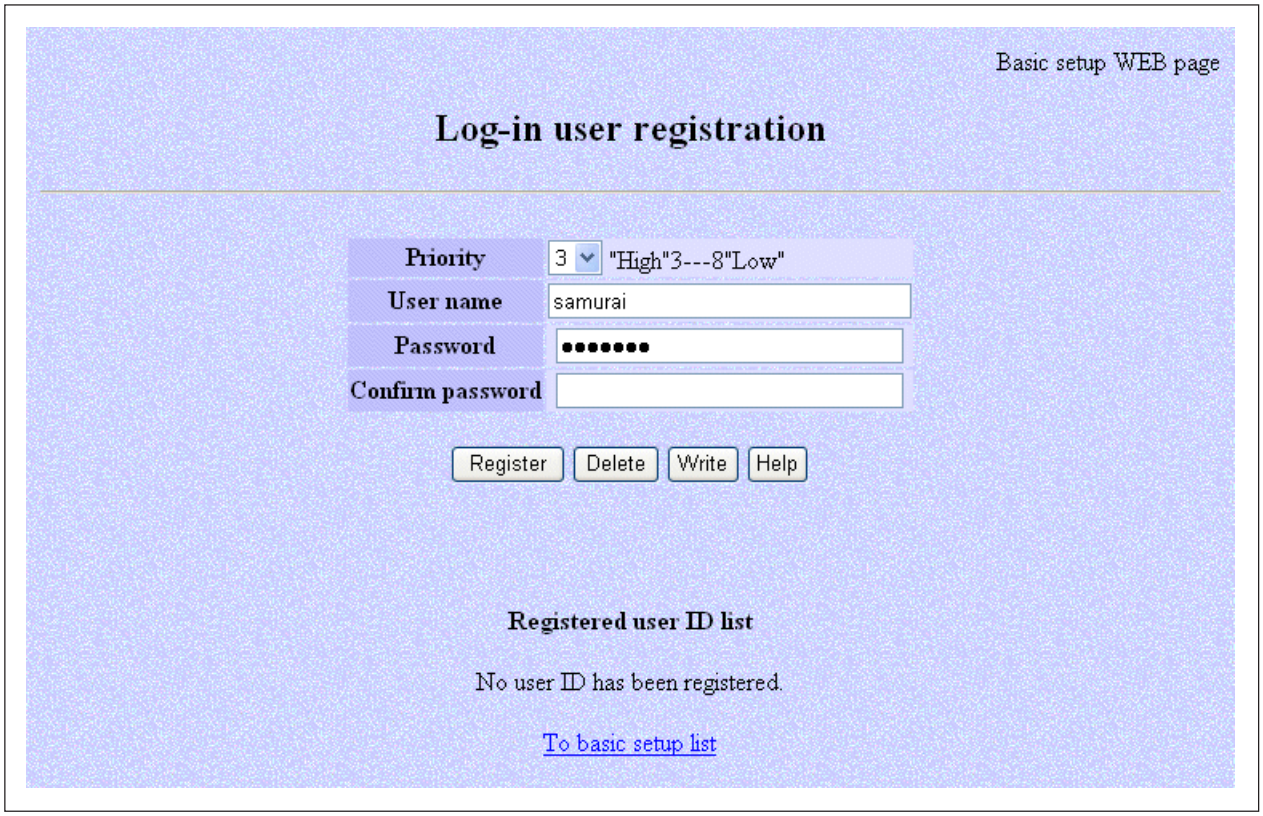
Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-3 Log-in user registration

◆ Click the [Login user registration] on the “Basic setup list” page to display the “Log-in user registration” page.



◆ Set the priority, user name and password, and enter the password again for verification. Then click the [Register] button to complete the login user registration.

Setting item	Description	Number of characters to enter
Priority	Refer to the table shown below.	-
User name	Set a name of a user who is allowed to access this WEB observation system.	Max. 31 half-width characters
Password	Set a password to access this WEB observation system.	Max. 31 half-width characters
Confirm password	Enter the password set above.	Max. 31 half-width characters

* By using the priority setting, access restrictions can be imposed on a user basis.

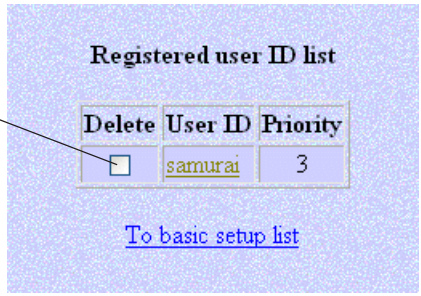
Priority	Target	Access right
2	Administrator	• Allowed to perform basic settings. • Allowed to perform observation settings. • Allowed to perform control observation. (allowed to write control data during control observation.)
3	Person in charge of observation settings	• Allowed to perform observation settings. • Allowed to perform control observation. (allowed to write control data during control observation.)
4	Person in charge of observation settings	• Allowed to perform control observation. (allowed to write control data during control observation.)
5	Observer	• Allowed to perform control observation. (read only)
6		• Allowed to perform control observation. (read only)
7		Disabled
8		Disabled

Section 4 WEB Module Setting

4-2 Basic Settings

◆ When registration is completed, the user is displayed on the “Registered user ID list”.

To delete a registered user, set this checkbox to ON and click the [Delete] button.



◆ Clicking [Write] button writes the settings to the flash memory of the WEB module.

* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

Important !

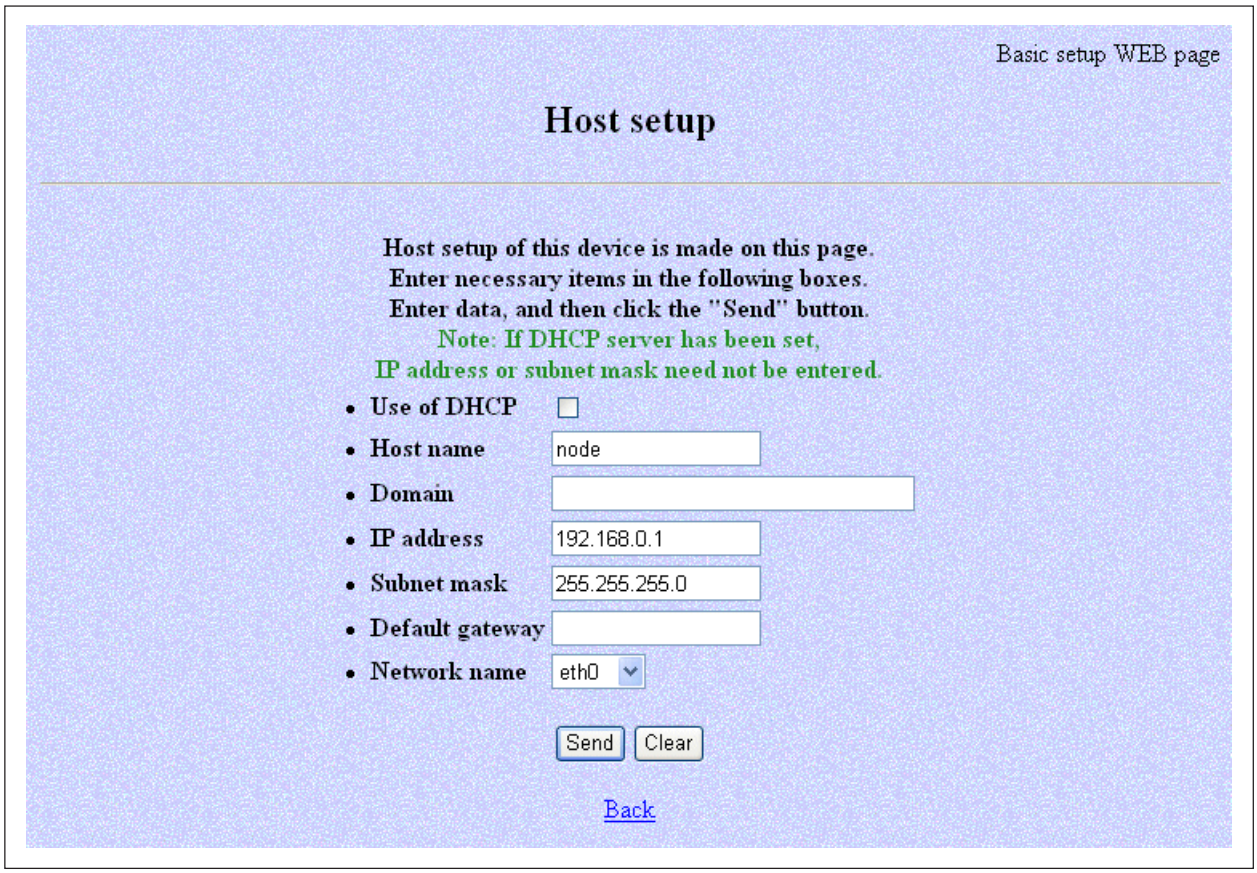
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-4 Network setup - Host setup

◆ Click the [Host setup] on the “Basic setup list” page to display the “Host setup” page.



Setting item	Description
Use of DHCP	To use DHCP, set this checkbox to ON. If DHCP is used, the IP address is automatically obtained. Therefore, it is not necessary to enter the following IP address, subnet mask, and default gateway. By default, this checkbox is set "OFF". Note: If there exists no DHCP server, do not set this checkbox to ON. If this checkbox is set to ON when there exists no DHCP server, it becomes impossible to connect from a browser.
Host name	Set a host name of the WEB module. (Max. 15 half-width characters)
Domain	Set a domain name of the WEB module. (Max. 15 half-width characters)
IP address	Set an IP address of the WEB module. The default is "192.168.0.1".
Subnet mask	Set a subnet mask of the WEB module. The default is "255.255.255.0".
Network name	Select an identifier of the network controller that the WEB module uses. Normally, select "eth0".

◆ After setting all necessary items, click the [Send] button. The [Host setup check] page is displayed. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed.
Clicking [Cancel] button stops writing.

* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

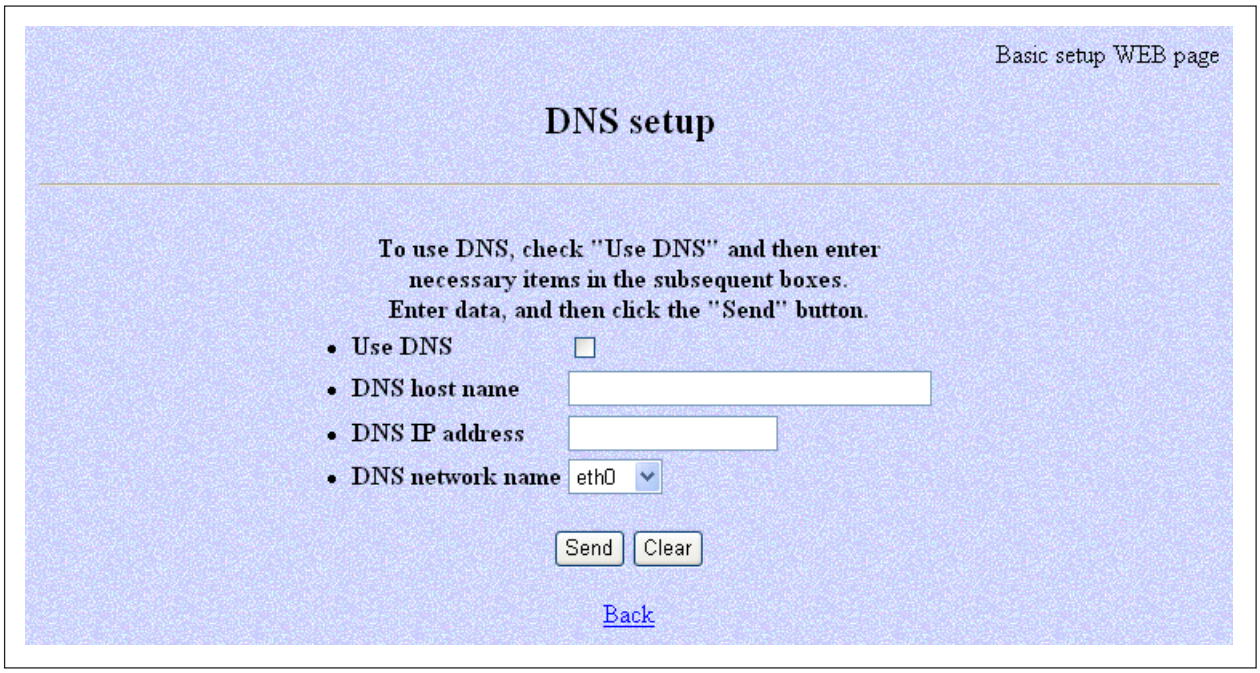
Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-5 Network setup - DNS setup

◆ Click the [DNS setup] on the “Basic setup list” page to display the “DNS setup” page.



Setting item	Description	Number of characters to enter
Use DNS	To use DNS, set this checkbox to ON and enter a DNS host name, DNS IP address and DNS network name. If there exists no DNS server, do not set this checkbox to ON.	-
DNS host name	Set a host name of DNS.	Max. 31 half-width characters
DNS IP address	Set an IP address of DNS.	Max. 31 half-width characters
DNS Network name	Select an identifier of the network controller that this WEB observation system uses to access DNS server. Normally, select "eth0".	-

◆ After setting all necessary items, click the [Send] button. The [DNS setup check] page is displayed. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed.
Clicking [Cancel] button stops writing.

* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-6 PPP setup

◆ Click the [PPP setup] on the “Basic setup list” page to display the “PPP setup” page.

Setting item	Description
Use PPP	To use the PPP function, set this checkbox to ON. Note: If the PPP setting is enabled, an IP address set on this page is enabled and it becomes impossible to access with the IP address set on the "Host setup" page.
Host name	Set a host name of the mail server. (max. 15 half-width characters) If the host name is changed here, the change is reflected to the host name in the "Host setup". The default is "node".
IP address	Set an IP address of the WEB module when connecting to the PPP. The default is "192.168.1.1".
Subnet mask	Set a subnet mask of the WEB module when connecting to the PPP. The default is "255.255.255.0".
Network name	Select an identifier of the network controller used in the PPP. The default is "com2".
Baud rate	Select the baud rate, data length, parity bit and stop bit of the serial controller used in the PPP. By default, "9600" is selected for the baud rate, "8 bits" for the data length, "None" for the parity bit, and "1" for the stop bit.
Data length	
Parity bit	
Stop bit	
TEL	Set a telephone number to connect to a dial-up server . Note: Do not enter any delimiter (hyphen, etc.).

Section 4 WEB Module Setting

4-2 Basic Settings

ID	Set an ID and password to log into a dial-up server. Both the ID and password can be up to half-width 31 characters long.
Password	
Non-communication supervise time	Select a time-up period after which connection is broken. The setting range is 1 to 9999 seconds. The default is "60" seconds.
Modem type	Select a line type for a modem or adapter to be used.
Authentification protocol	Select an authentification protocol used when the PPP server is operating.
Remote gateway	Specify weather the network to which the PPP is connected is used as a remote gateway or not.

◆ After setting all necessary items, click the [Send] button. The [PPP setup check] page is displayed. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed.
Clicking [Cancel] button stops writing.

* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-7 Mail server setup

◆ Click the [Mail server setup] on the “Basic setup list” page to display the “Mail server setup” page.

Setting item	Description	Number of characters entered
Host name	Set a host name of the external mail server to which this WEB observation system is connected.	Max. 31 half-width characters
IP address	Set an IP address of the external mail server. When DNS server is not used, be sure to set this IP address.	Max. 15 half-width characters
Network name	Select an identifier of the network controller that this WEB observation system uses to access the external mail server. Normally, select "eth0".	Max. 31 half-width characters
Port No.	Set a port No. of the mail server. Normally, the default of "25" is used.	Max. 4-digit number

◆ After setting all necessary items, click the [Send] button. The [Mail server setup check] page is displayed. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed.
Clicking [Cancel] button stops writing.

* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-2 Basic Settings

4-2-8 FTP server setup

◆ Click the [FTP server setup] on the “Basic setup list” page to display the “FTP server setup” page.

Basic setup WEB page
FTP server setup
To download application program and user Web page through network, set here FTP server to be downloaded from.
Enter necessary items in the following boxes.
Enter data, and then click the "Send" button.
Note: If DNS is not used, be sure to enter IP address.
Host name
IP address
Network name
eth0
Send
Clear
Back

Setting item	Description
IP address	Set an IP address of the FTP server.
Host name	Set a host name of the FTP server (max. 15 half-width characters). When the IP address is set, it is not necessary to set this item.
Network name	Fixed to "eth0"

◆ After setting all necessary items, click the [Send] button. The [FTP server setup check] page is displayed. Check the settings and then click the [Write] button to write them to the flash memory of the WEB module. When writing to the WEB module is completed, the “Write complete” page is displayed.
Clicking [Cancel] button stops writing.

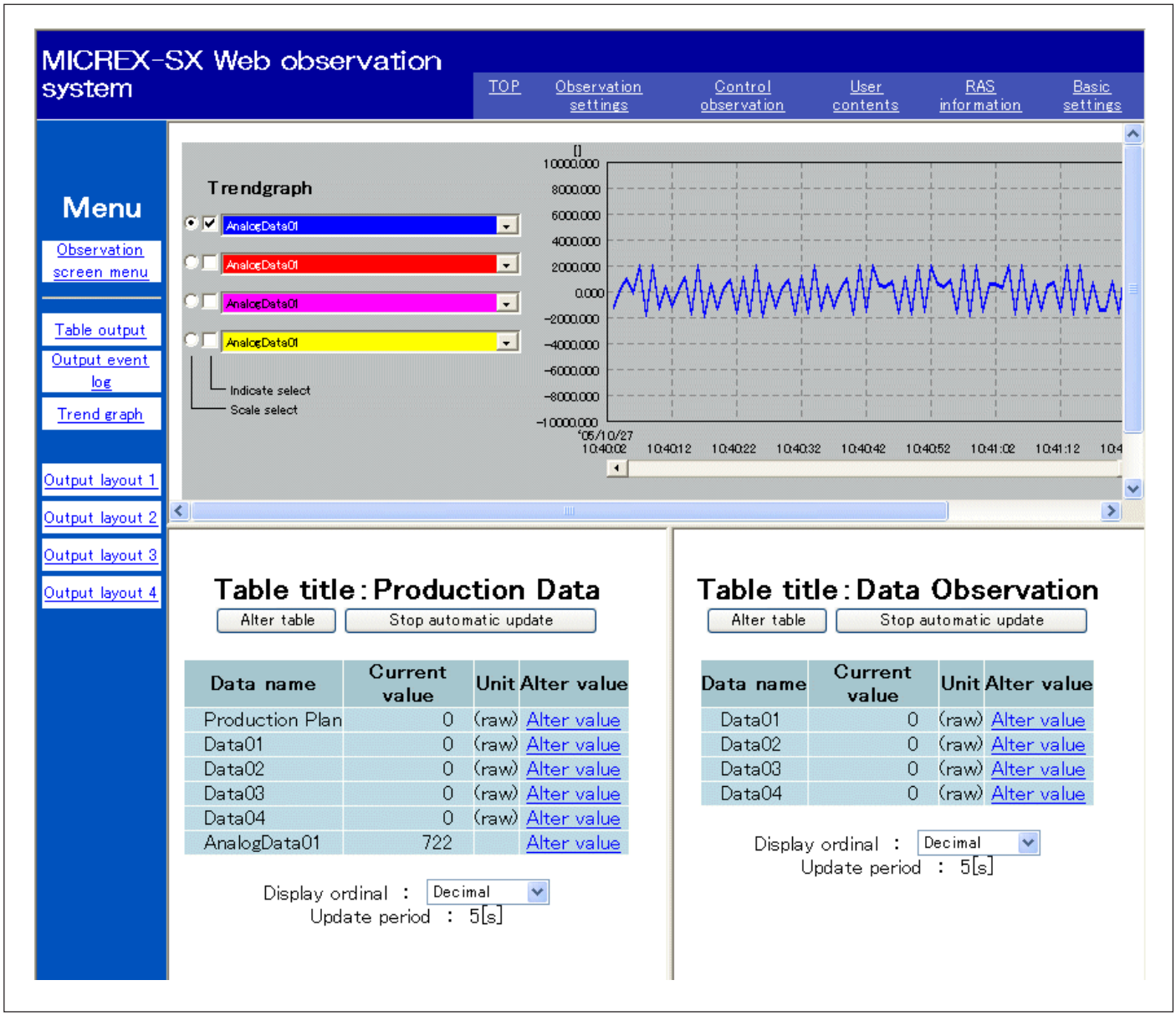
* It is necessary to power the PLC system off and on again to allow the WEB module to recognize the data written to its flash memory.

Important !
Be sure to take notes of your settings. It is not possible for a user to restore factory default settings. To restore factory default settings, you need to send the product back to Fuji factory. This service is available on a chargeable basis.

Section 4 WEB Module Setting

4-3 WEB Observation System

You can observe the status of the memory in the CPU and display them in tabular or graphic form on the observation page as shown below.

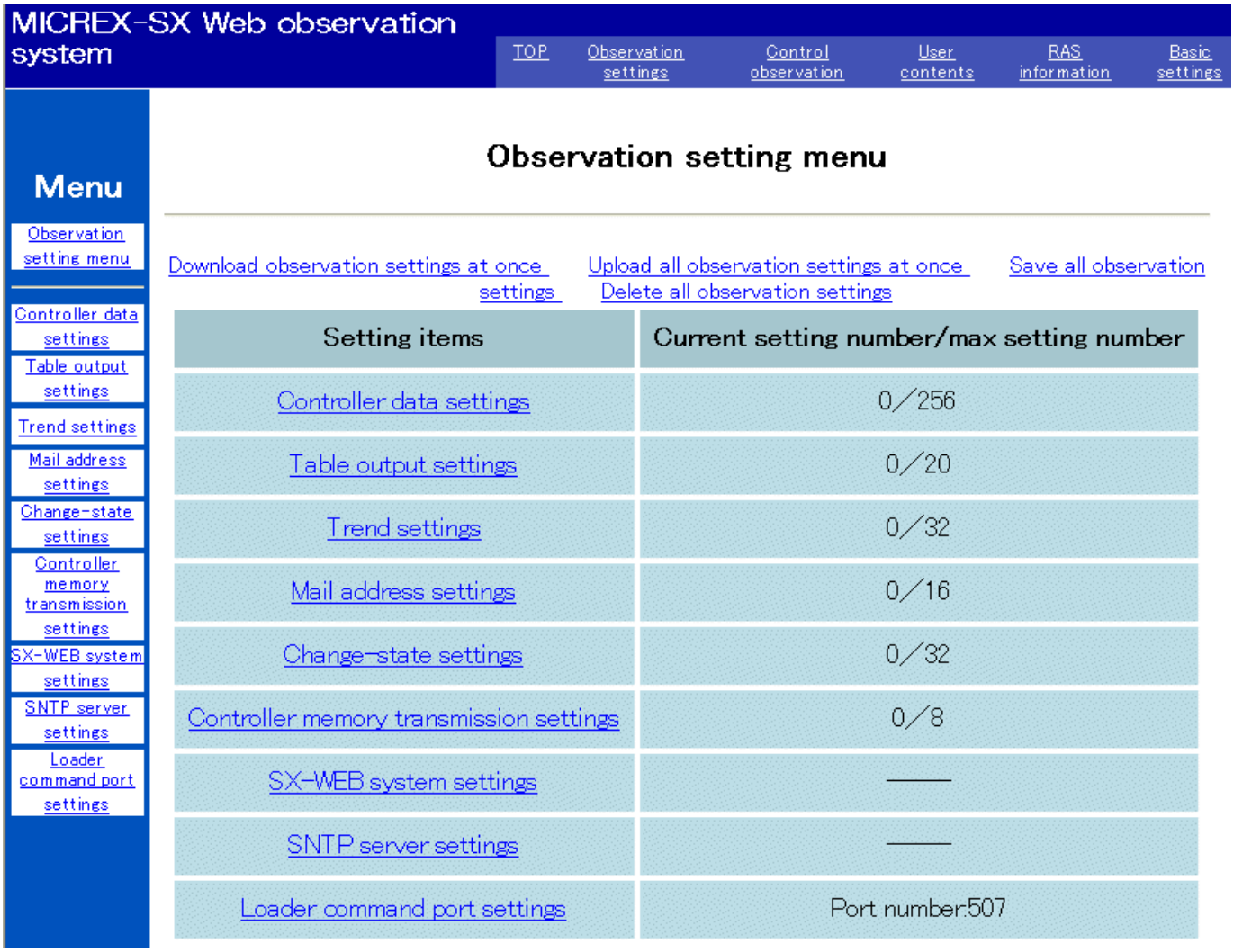


Section 4 WEB Module Setting

4-3 WEB Observation System

4-3-1 Observation setting menu

◆ Click the [Observation settings] on the top page of “WEB observation system” to display the “Observation setting menu” page.



Observation setting menu

- **Controller data settings** — Set data memory in the CPU that the WEB module deals with. Data set here are used for tables and graphs.
- **Table output settings** — Set data to output to a table. The data can be selected from the data set in the “Controller data settings.”
- **Trend settings** — Set a range of a trend graph to be displayed on the observation page and the contents to transmit to the external FTP server.
- **Mail address settings** — Set destination mail addresses when mails are sent from the WEB module.
- **Change-state settings** — Perform settings for observing state changes in the data set in the “Controller data settings.”
- **Controller memory transmission settings** — Set data memory in the CPU to be transmitted to the external FTP server.
- **SX-WEB system settings** — Set data about the external FTP server that transmits observation data, and “timer event” and “controller data event” that are used as the start timing of transmission.
- **SNTP server settings** — Set SNTP server.
- **Loader command port settings** — Set a port to connect D300win loader. The setting range of the port No. is 507 to 65533.

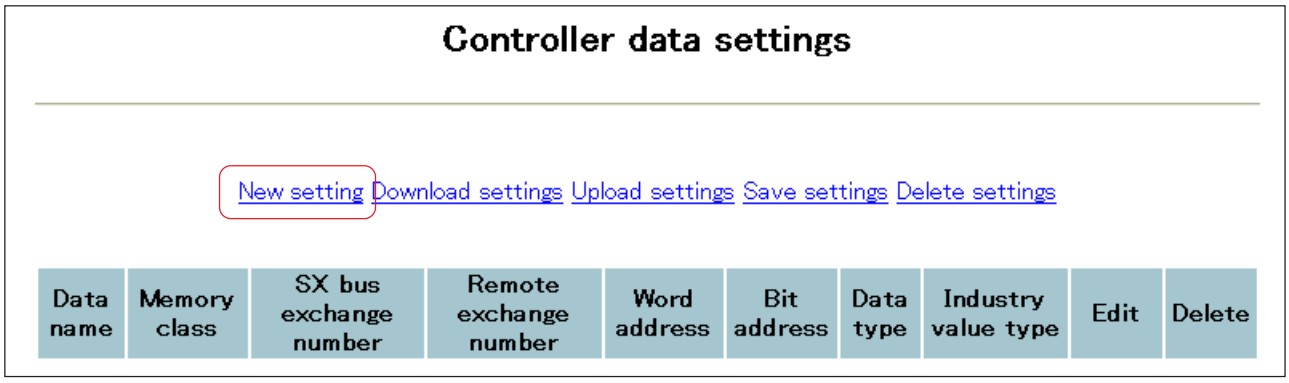
Section 4 WEB Module Setting

4-3 WEB Observation System

4-3-2 Controller data settings

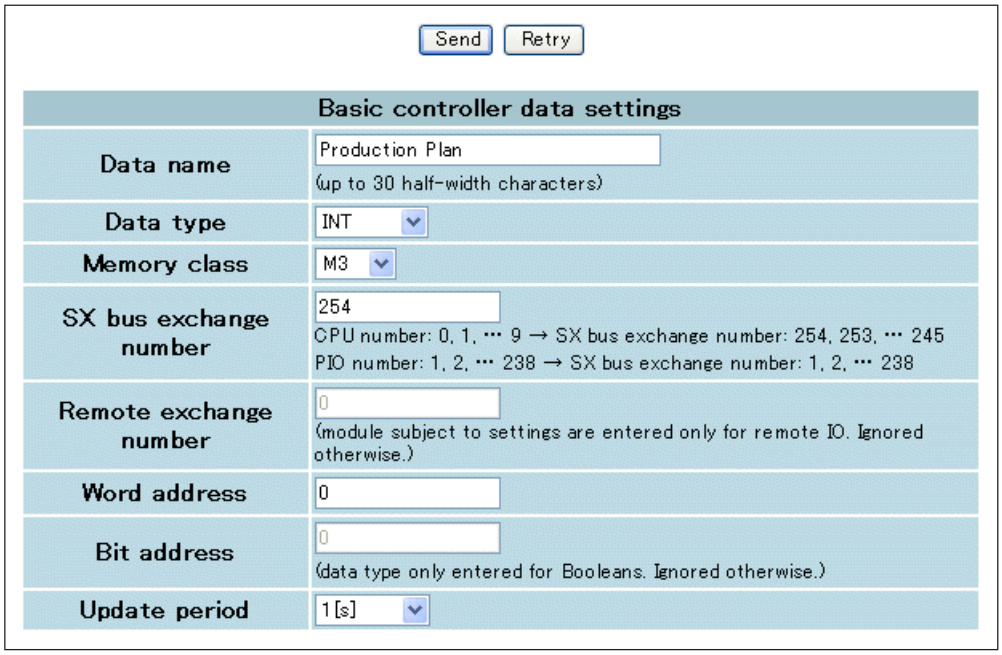
Set memories in SPH_CPU that become the sources of tables and graphs that are to be displayed on the observation page of the WEB module (These memories are called “controller data” in the WEB module) . Controller data are set on a one-by-one basis. Maximum 256 items can be set. (However, for STRING-type data, max. 16 items.)

◆ Click the [Controller data settings] on the “Observation setting menu” page to display the “Controller data settings” page.



(1) Basic controller data settings

◆ Click the [New setting] on the “Controller data settings” page to display the “Basic controller data settings” page.



Setting item	Description
Data name	Set a data name within half-width 30 characters long. This is not necessary to be the same as the variable name used in the program of SPH. Note: The following characters are not available: , $ & % ” ’
Data type	Select a data type. This must be the same data type as the one specified in the program of SPH.
Mamory class	Select a memory class in the SPH_CPU. IQ: input/output memory, M1: standard memory, M3: retain memory, M10: system memory
SX bus exchange No.	Set the SX bus station No. of the target SPH_CPU module. For example, for CPU0, the SX bus station No. is 254.
Remote exchange No.	If the target module for the controller data setting is remote I/O such as T-link and OPCN-1, set the link station No.
Word address	Set a word address of the controller data in decimal notation.
Bit address	Set a bit address of the controller data in decimal notation (0 to 15).
Update period	Set a period of reading data from the SPH_CPU to the WEB module. The setting range is as follows: 50ms, 100ms, 1s (default), 2s, 5s, 10s, 30s, 1min, 2min, 10min, and 20min.

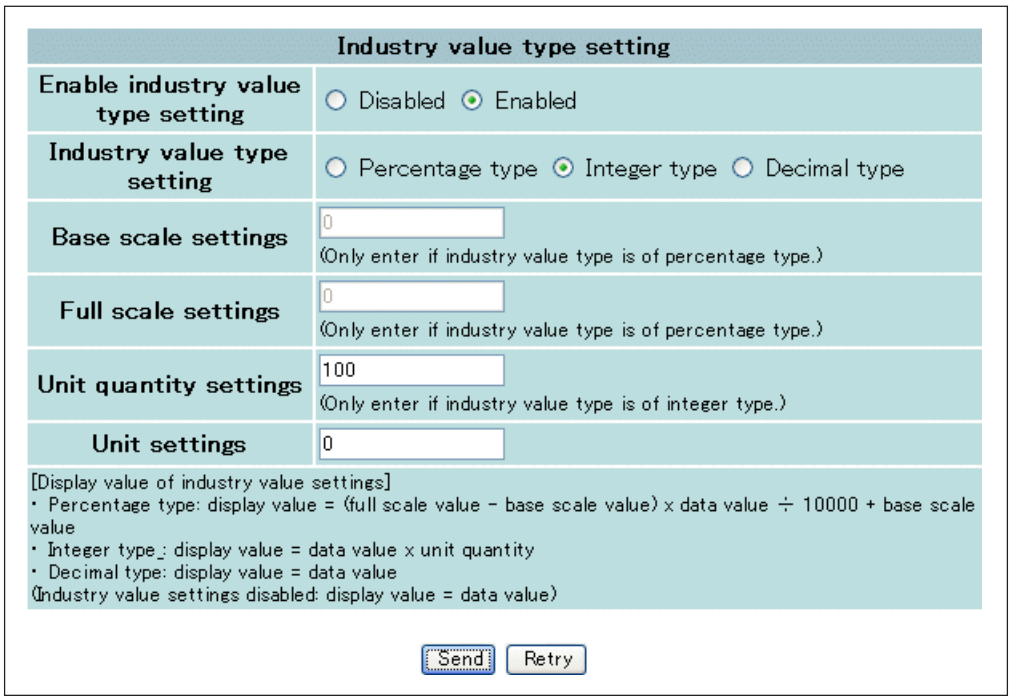
Section 4 WEB Module Setting

4-3 WEB Observation System

(2) Industry value type setting

If you want to use the controller data to be registered after converted to industry values, the data can be converted to industry values by performing industry value type settings in addition to the basic controller data settings.

◆ After registering data in “(1) Basic controller data setting”, perform industry value type settings on the “Industry value type setting” box displayed below the “Basic controller data setting” box.

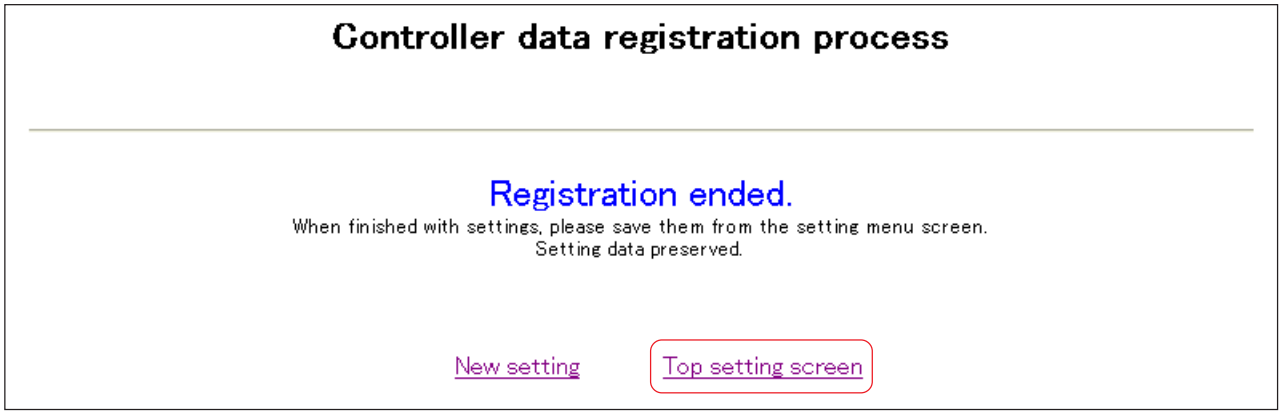

Industry value type setting
Enable industry value type setting
Disabled
Enabled
Industry value type setting
Percentage type
Integer type
Decimal type
Base scale settings
0
(Only enter if industry value type is of percentage type.)
Full scale settings
0
(Only enter if industry value type is of percentage type.)
Unit quantity settings
100
(Only enter if industry value type is of integer type.)
Unit settings
0
[Display value of industry value settings]
• Percentage type: display value = (full scale value - base scale value) x data value ÷ 10000 + base scale value
• Integer type: display value = data value x unit quantity
• Decimal type: display value = data value
(Industry value settings disabled: display value = data value)
Send
Retry

Setting item	Description
Enable industry value type setting	If basic controller data is registered in industry value type, select "Enable".
Industry value type setting	Select an industry value type from percentage type, integer type or decimal type.
Base scale setting	Set a base scale value and full scale value when the industry value is used in percentage type. For the full scale, set a velue at the time when the industry value becomes 100.00%. For the base scale, set a velue at the time when the industry value becomes 0.00%. The industry value can be calculated by the formula shown below. (Industry value) = (Full scale value - Base scale value) x (Input value) ÷ 10000 + (Base scale value) * Only following data types can be used for the input value: INT type, DINT type, UINT type, and UDINT type.
Full case setting	
Unit quantity setting	When using the industry value in integer type, enter the quantity of controller data per unit in integer type.
Unit setting	Set a unit of the industry value within 16 half-width characters long. The following characters are not available: , $ & % ” ’

Section 4 WEB Module Setting

4-3 WEB Observation System

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue to register controller data, click the [New setting] button.
If you click the [Top setting screen], the specified controller data are displayed.


Controller data registration process
Registration ended.
When finished with settings, please save them from the setting menu screen.
Setting data preserved.
New setting
Top setting screen

Data name	Memory class	SX bus exchange number	Remote exchange number	Word address	Bit address	Data type	Industry value type	Edit	Delete
Production Plan	M3	254	0	0	0	INT	-	Edit	Delete
Data01	M1	254	0	0	0	INT	-	Edit	Delete
Data02	M1	254	0	1	0	INT	-	Edit	Delete
Data03	M1	254	0	2	0	INT	-	Edit	Delete
Data04	M1	254	0	3	0	INT	-	Edit	Delete
AnalogData01	M1	254	0	10	0	INT	Integer type	Edit	Delete

<Other functions on the controller data setting page>

1) Download settings
Data registered on the controller data setting page is downloaded to a file in the personal computer in the CSV format.
Default name: CNT_DT. CSV

2) Upload settings
Data about controller settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
All the set data are deleted.
Note: If the “Delete settings” command is executed, controller data that are registered in the trend settings, change-state settings, etc. are also deleted.

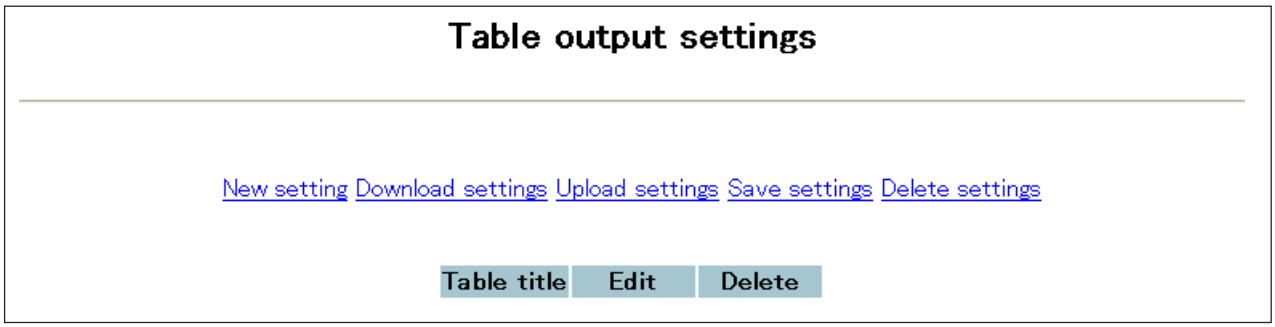
Section 4 WEB Module Setting

4-3 WEB Observation System

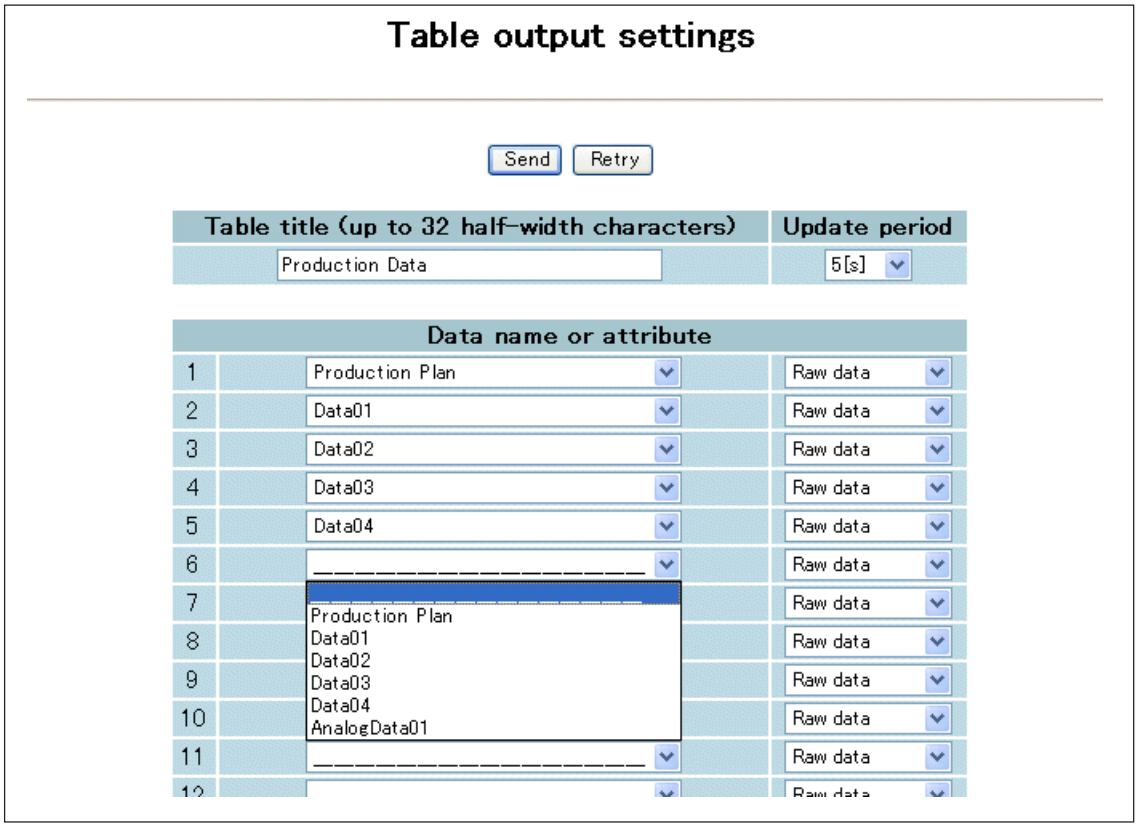
4-3-3 Table output settings

Set contents of tables that are to be displayed on the observation page. Up to 20 tables can be registered.

◆ Click the [Table output settings] on the “Observation setting menu” page to display the “Table output settings” page.



◆ Click the [New setting] on the “Table output settings” page to display the setting page shown below.

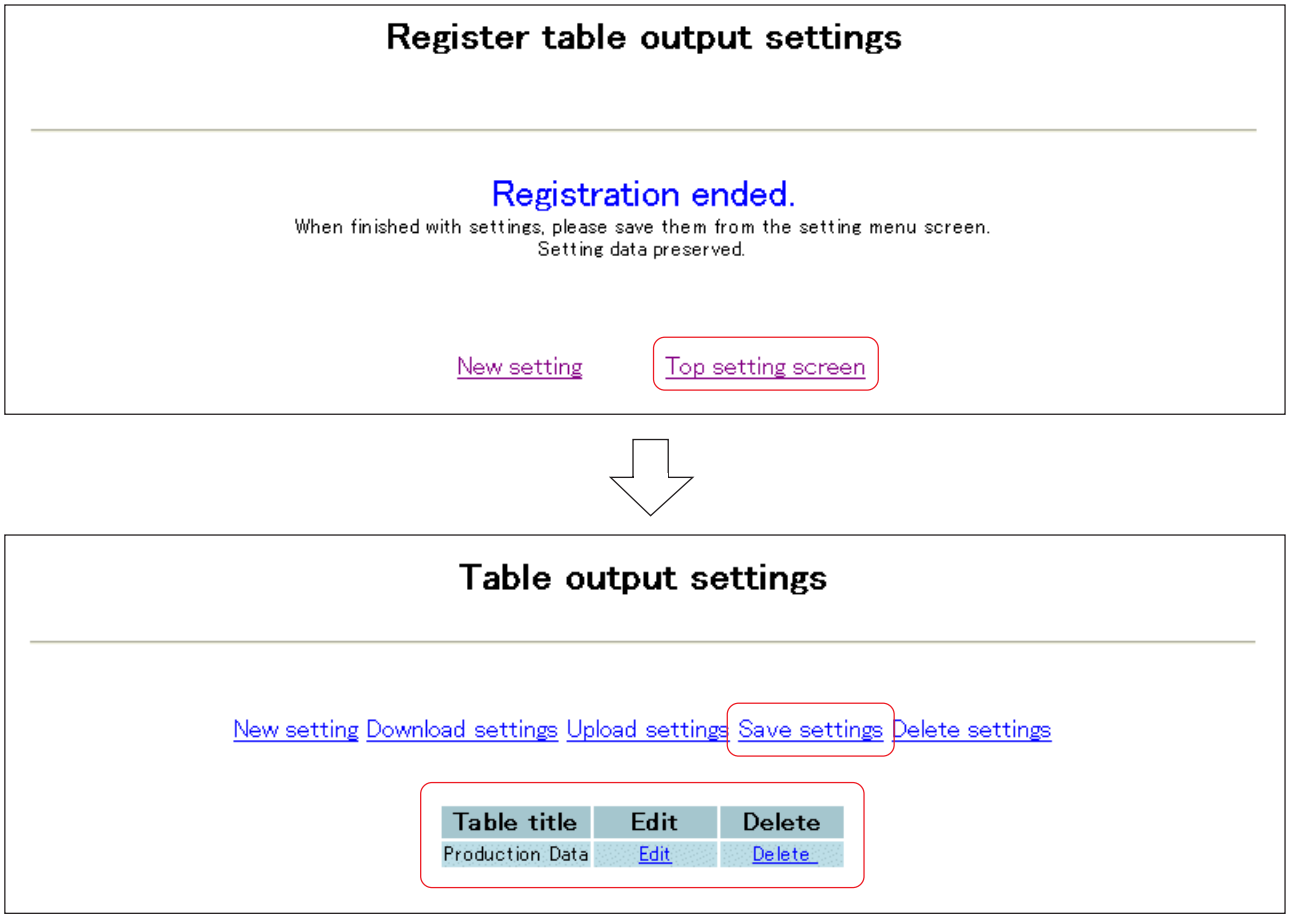


Setting item	Description
Table title	Set a table title to be displayed on the observation page within 32 half-width characters long. Note: The following characters are not available: , $ & % ” ’
Update period	Select a update period of the table data from 5s (default) or 10s.
Data name	Set controller data to be displayed on the table. Up to 20 items of controller data can be set for one table.
Attribute	Select an attribute of the controller data. Raw data: Data in the memory are displayed as it is. Industry value: If the industry value type setting is enabled for the controller data, the data is outputted in the specified industry value type. Integral value: If the controller data is BOOL type and "itegrals" is enabled in the change-state settings discribed later, this is enabled. A value that the leading edges or trailing edges of the data are counted is displayed.

Section 4 WEB Module Setting

4-3 WEB Observation System

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue the table output setting, click the [New setting] button.
If you click the [Top setting screen], the specified tables are displayed.



◆ To save the table output data registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

<Other functions on the table output setting page>

1) Download settings
Data registered on the table output setting page is downloaded to a file in the personal computer in the CSV format.
Default name: CCF_DT. CSV

2) Upload settings
Data about table output settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
All the set data are deleted.

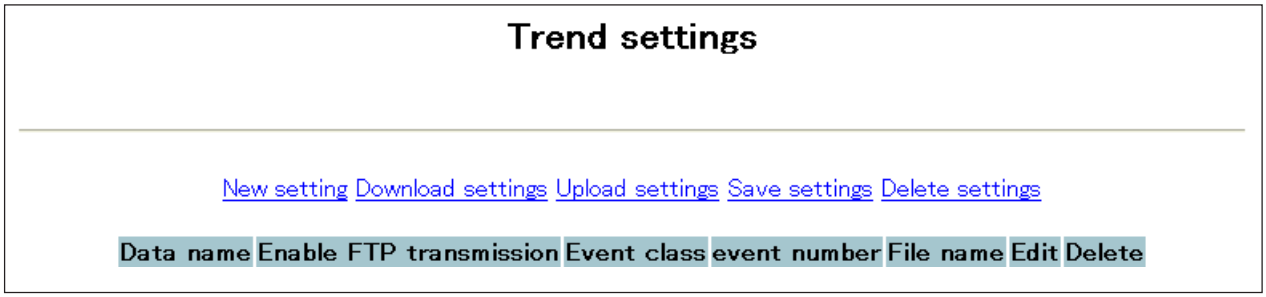
Section 4 WEB Module Setting

4-3 WEB Observation System

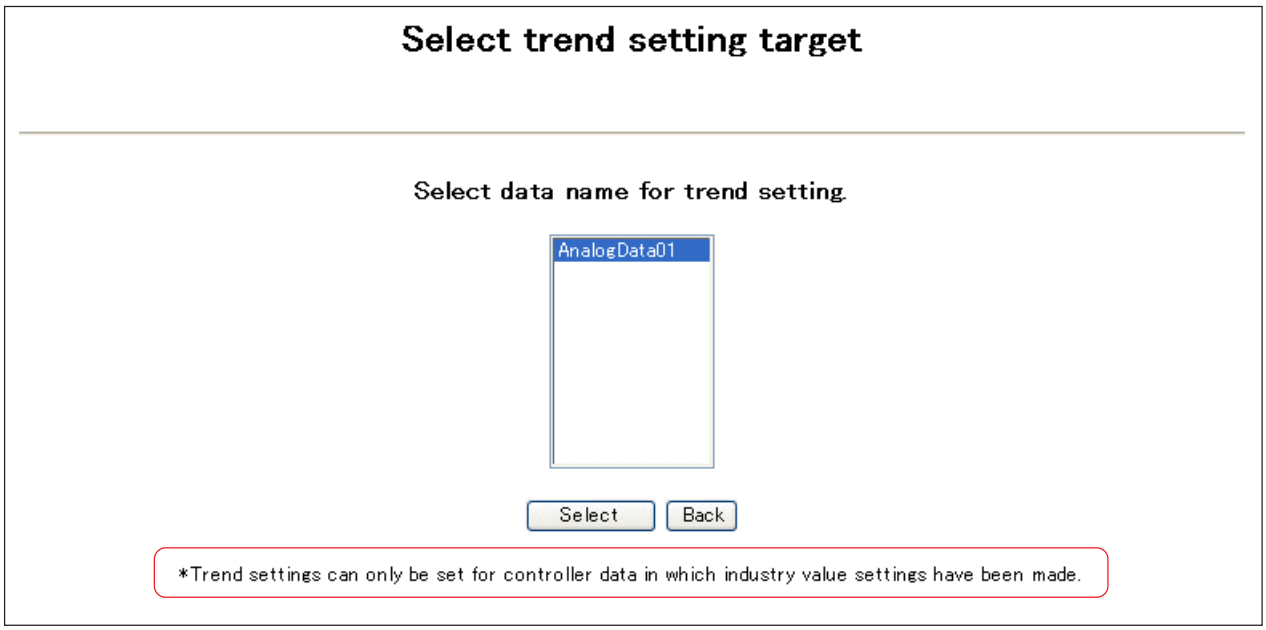
4-3-4 Trend settings

Set trend graphs that are to be displayed on the observation page of the WEB module. Up to 32 trend graphs can be registered. For the retrieval period of the trend data, the period set in the “controller data” is applied.
In addition, up to 10000 items of trend data are collected for one trend graph. If more than 10000 items are collected, they are deleted in chronological order.

◆ Click the [Trend settings] on the “Observation setting menu” page to display the “Trend settings” page.



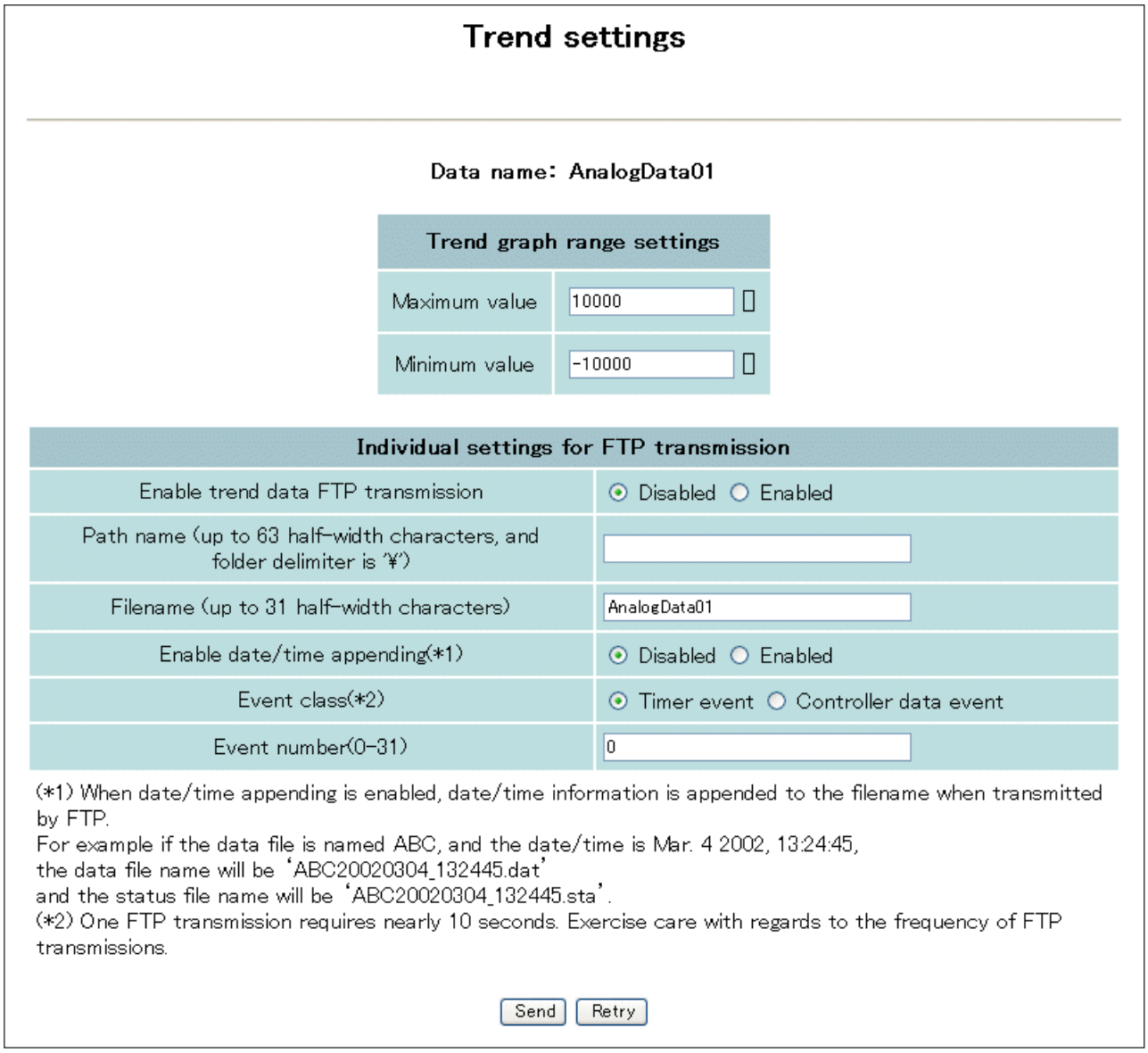
◆ Click the [New setting] on the “Trend settings” page to display the setting page shown below.


Select trend setting target
Select data name for trend setting.
AnalogData01
Select
Back
*Trend settings can only be set for controller data in which industry value settings have been made.

◆ Select data for trend setting (only controller data with industry value setting can be selected) and click the “Select” button to display the following setting page.

Section 4 WEB Module Setting

4-3 WEB Observation System



Trend settings

Data name: AnalogData01

Trend graph range settings	
Maximum value	10000
Minimum value	-10000

Individual settings for FTP transmission	
Enable trend data FTP transmission	Disabled Enabled
Path name (up to 63 half-width characters, and folder delimiter is '¥')	
Filename (up to 31 half-width characters)	AnalogData01
Enable date/time appending(*1)	Disabled Enabled
Event class(*2)	Timer event Controller data event
Event number(0-31)	0

(*1) When date/time appending is enabled, date/time information is appended to the filename when transmitted by FTP.
For example if the data file is named ABC, and the date/time is Mar. 4 2002, 13:24:45,
the data file name will be 'ABC20020304_132445.dat'
and the status file name will be 'ABC20020304_132445.sta'.
(*2) One FTP transmission requires nearly 10 seconds. Exercise care with regards to the frequency of FTP transmissions.

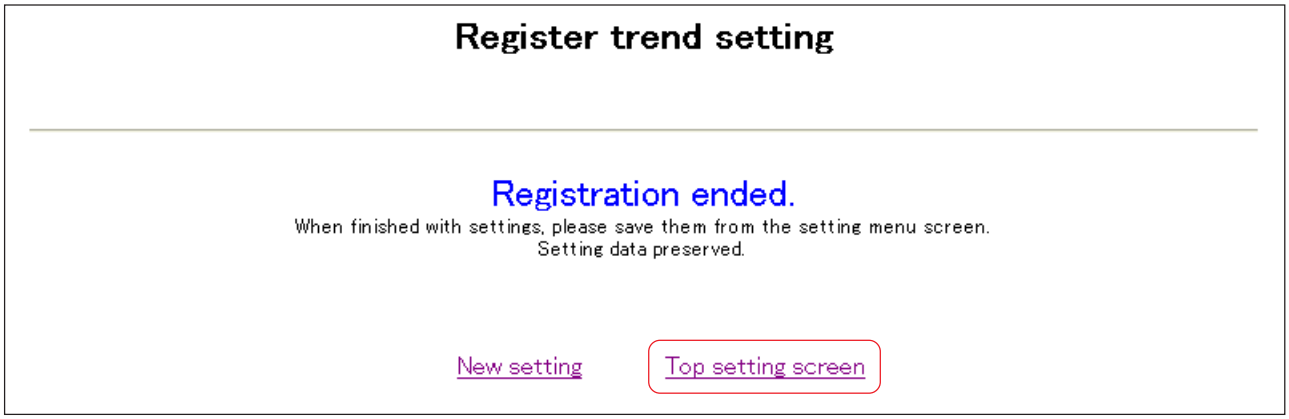
Send Retry

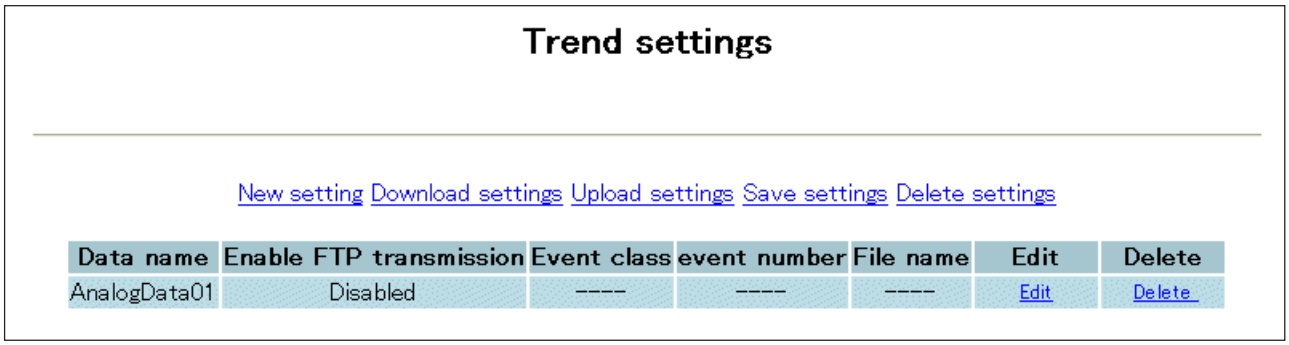
Setting item	Description
Trend graph range settings	Set the maximum value and minimum value when trend data is displayed on the standard observation page.
Individual settings for FTP transmission	Set these items when trend data is transmitted to an external FTP server. If trend data is not transfmitted to an external server, it is not necessary to set these items. * For details of these settings, refer to "5-3-1 FTP transmission of trend data".

Section 4 WEB Module Setting

4-3 WEB Observation System

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue the trend setting, click the [New setting] button.
If you click the [Top setting screen], the specified trend data are displayed.


Register trend setting
Registration ended.
When finished with settings, please save them from the setting menu screen.
Setting data preserved.
New setting
Top setting screen



◆ To save the trend settings registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

<Other functions on the trend setting page>

1) Download settings
Data registered on the trend setting page is downloaded to a file in the personal computer in the CSV format.
Default name: TREND_DT. CSV

2) Upload settings
Data about trend settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
All the set data are deleted.

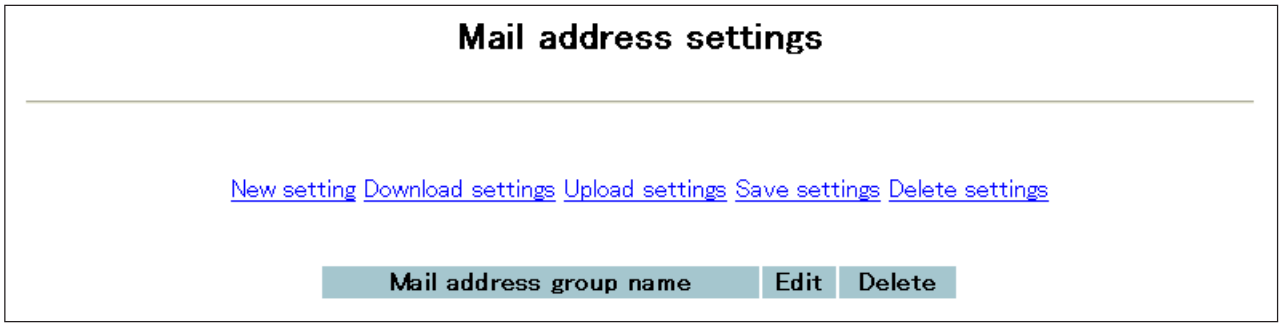
Section 4 WEB Module Setting

4-3 WEB Observation System

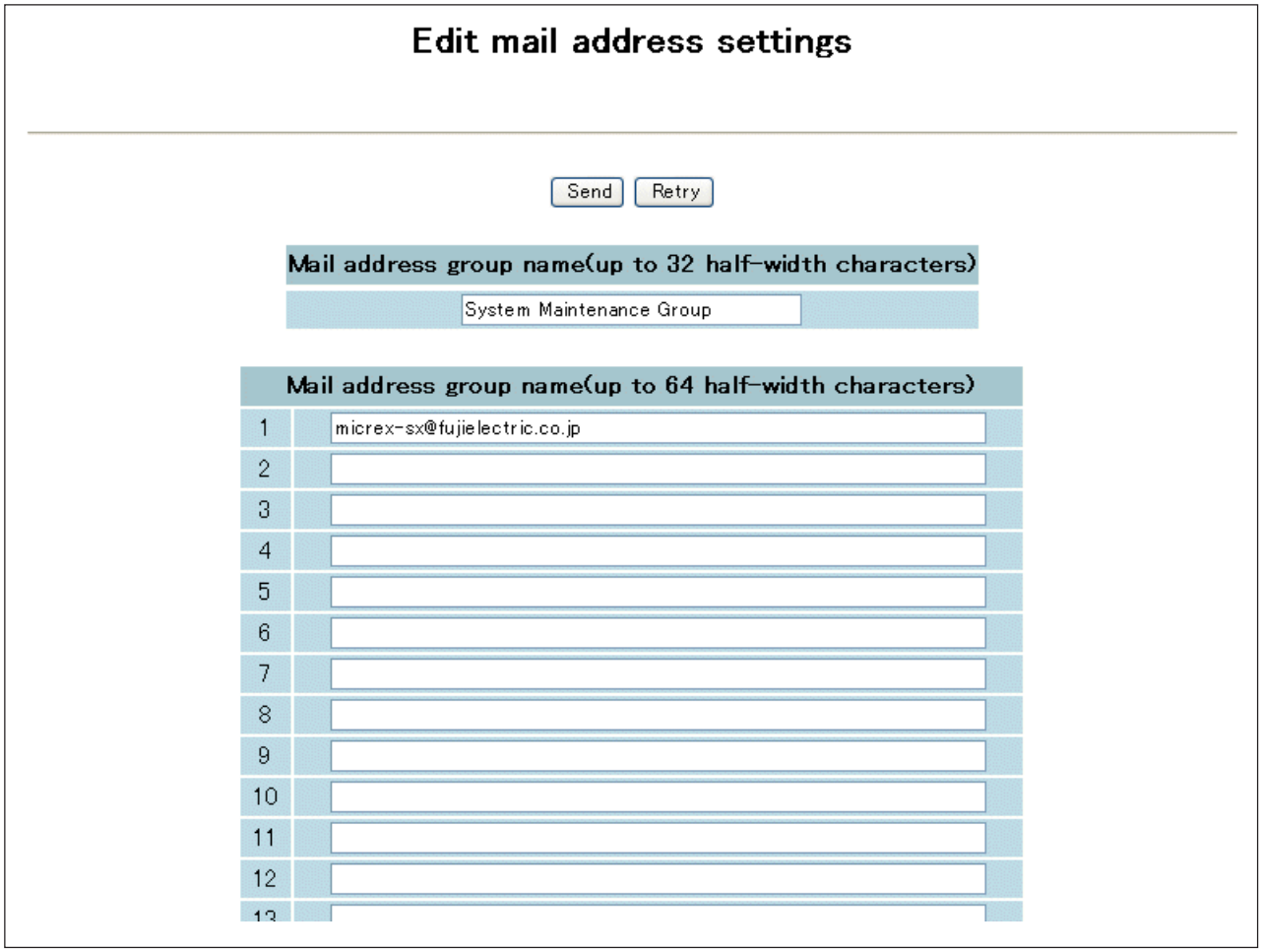
4-3-5 Mail address settings

Set destination mail addresses when the WEB module sends mails. Up to 16 mail address groups can be set (up to 16 mail addresses can be set for one group).

◆ Click the [Mail address settings] on the “Observation setting menu” page to display the “Mail address settings” page.



◆ Click the [New setting] on the “Mail address settings” page to display the setting page shown below.



Setting item	Description
Mail address group name	Set a mail address group name within 32 half-width characters long. Note: The following characters are not available: , $ & % ” ’
Mail address settings	Set mail addresses. Up to 16 mail addresses can be set for one mail address group.

Section 4 WEB Module Setting

4-3 WEB Observation System

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue the mail address setting, click the [New setting] button.
If you click the [Top setting screen], the specified mail address groups are displayed.

◆ To save the mail address settings registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

<Other functions on the mail address setting page>

1) Download settings
Data registered on the mail address setting page is downloaded to a file in the personal computer in the CSV format.
Default name: MAIL_DT. CSV

2) Upload settings
Data about mail address settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
All the set data are deleted.

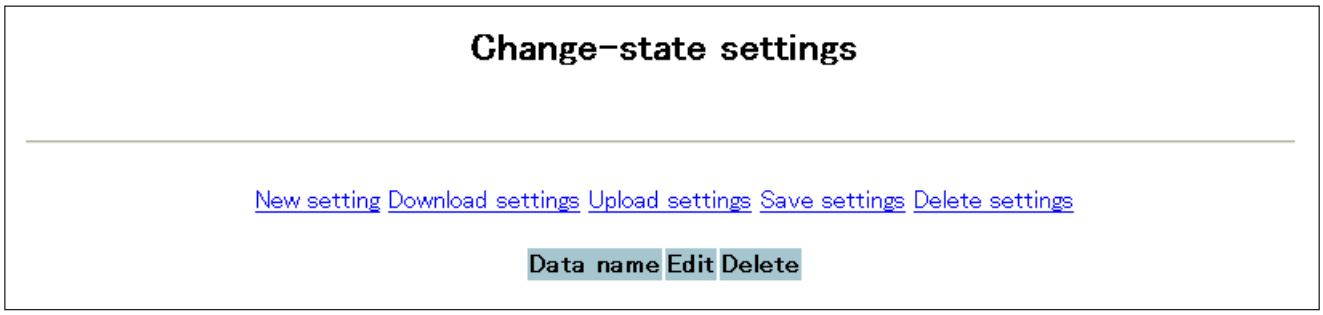
Section 4 WEB Module Setting

4-3 WEB Observation System

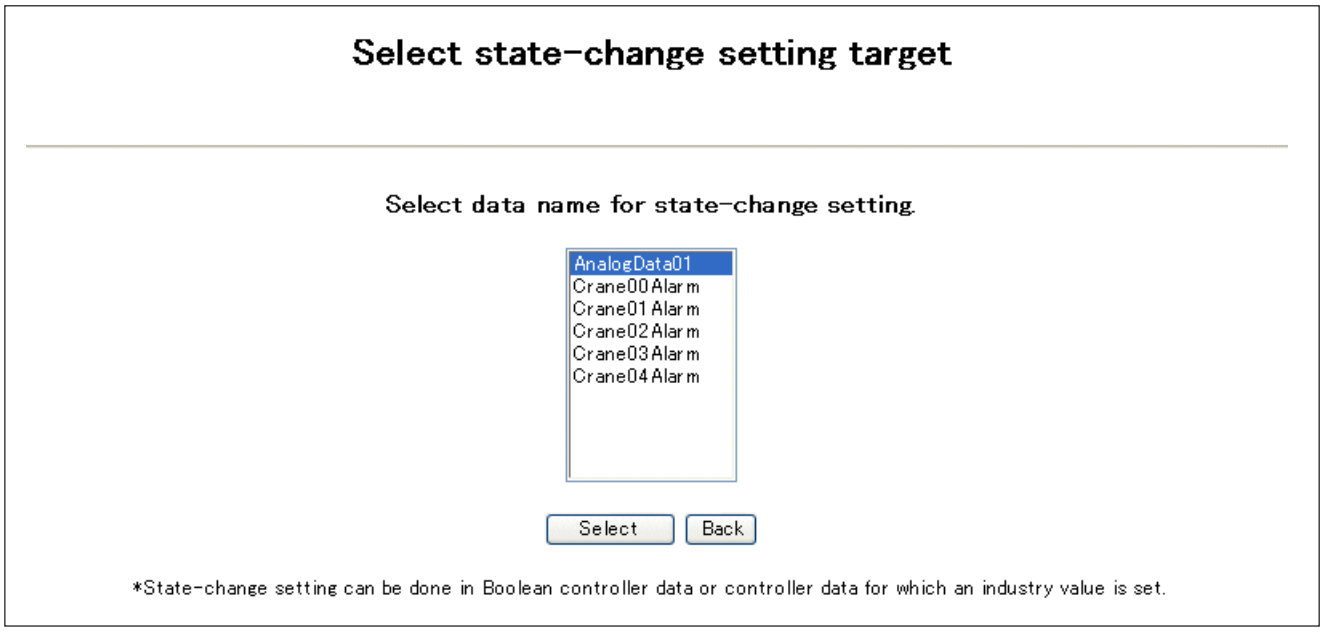
4-3-6 Change-state settings

Set how the WEB module works when the state of the specified controller data (BOOL type data or data converted to industry value type) changes. State-change setting can be performed for up to 32 items.

◆ Click the [Change-state settings] on the “Observation setting menu” page to display the “Change-state settings” page.



◆ Click the [New setting] on the “Change-state settings” page to display the setting page shown below.

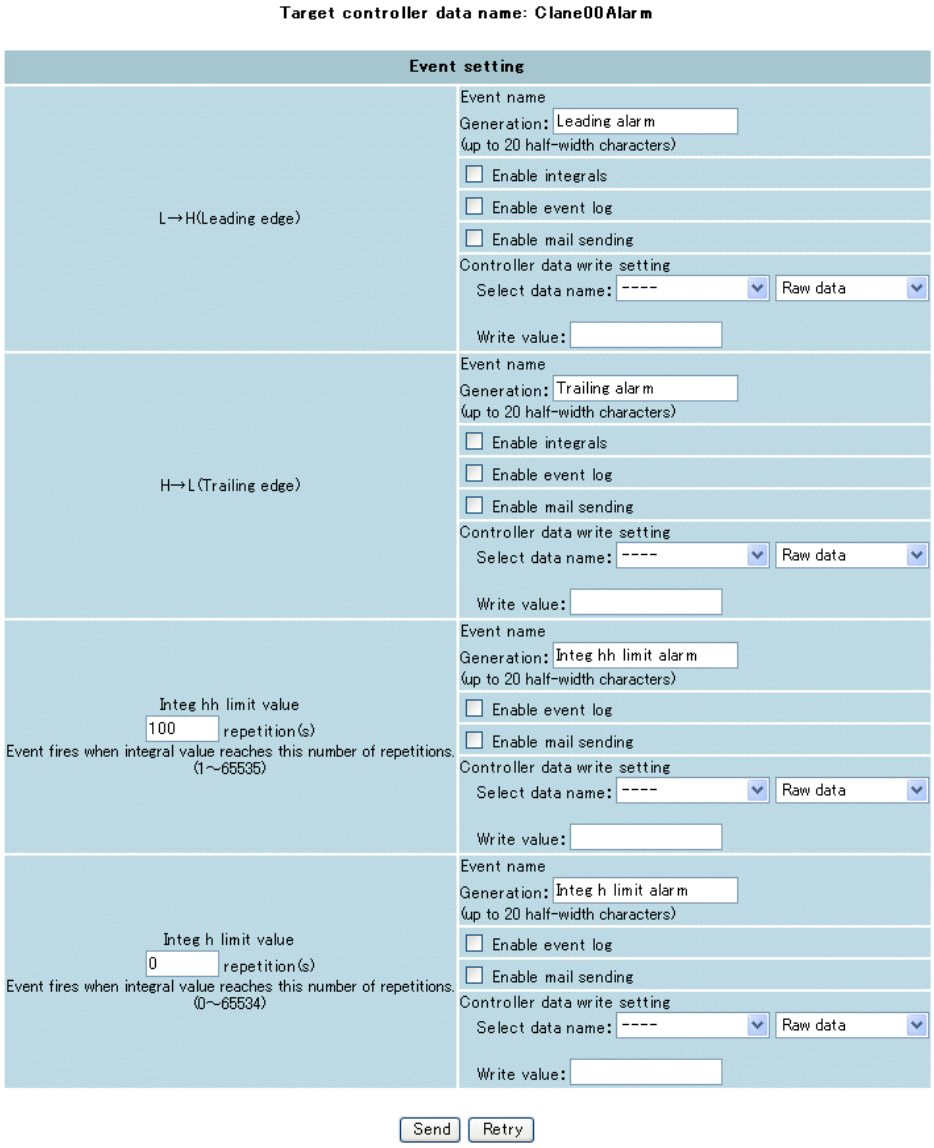


◆ Select data for change-state setting and click the [Select] button. The event setting page is displayed. The event setting page varies depending on the selected data type (BOOL type or industry value type).

Section 4 WEB Module Setting

4-3 WEB Observation System

(1) For BOOL type controller data

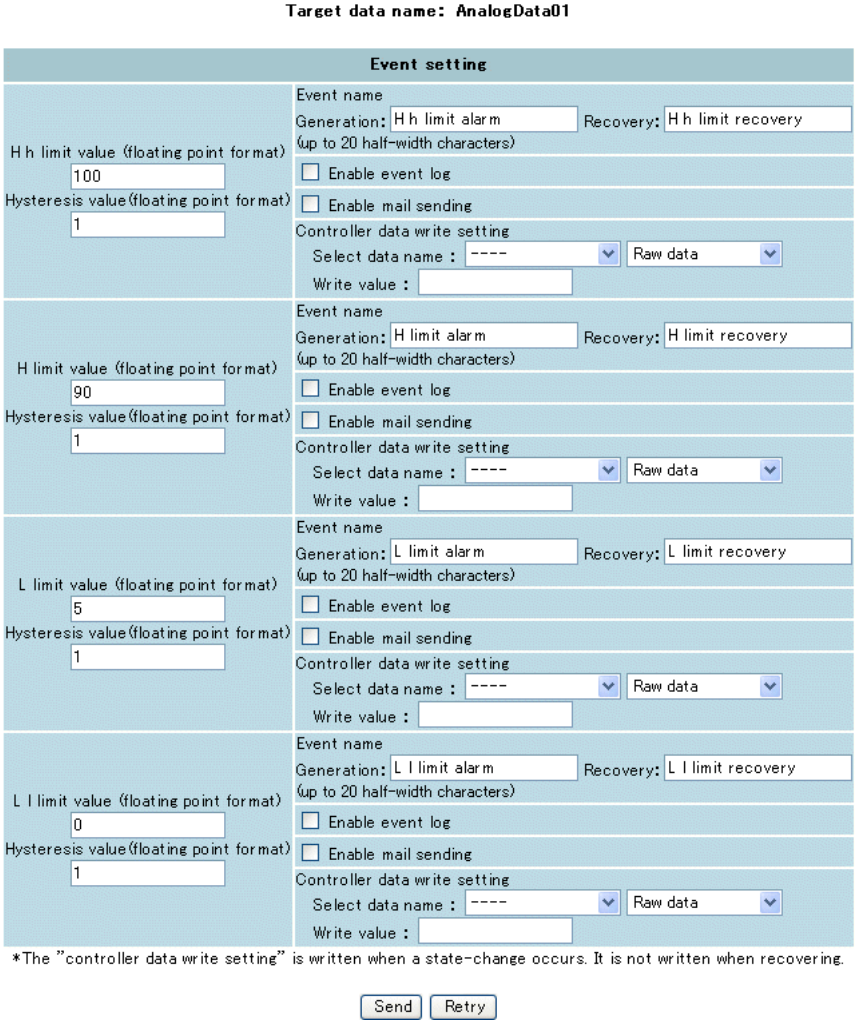


Setting item	Description
Event name	Set an event name at the time when the state changes within 20 half-width characters long. Note: The following characters are not available: , $ & % ” ’
Enable integrals	If this checkbox is set to ON, the number of times the controller data has risen is counted and an event occurs if the count exceeds the specified integral high high limit value and integral high limit value.
Enable event log	If this checkbox is set to ON, this data is collected and recorded. 1000 occurrences of the event are held. What are recorded as a event log are as follows: • Date/time of occurrence of the event: year, month, day, hour, minute, and second • Data value of the controller data in which an event has occurred • Integral velue if "integrals" is enabled.
Enable mail sending	If this checkbox is set to ON, a mail is sent to the specified mail address group when the condicitons are met. The contents of the mail can be set in the "Change-state mail settings" described later.
Controller data write setting	When an event occurs, a set value is written to a specified controller data. Writing of data is performed only when the event occurs. The value to be written must match the data format of the destination controller data.
Integ hh limit value	If the integral value exceeds a value set here, an event of "integral high high limit value" occurs. The integral value can be up to 65535 times.
Integ h limit value	If the integral value exceeds a value set here, an event of "integral high limit value" occurs. The integral value can be up to 65534 times.

Section 4 WEB Module Setting

4-3 WEB Observation System

(2) For intustry value type controller data



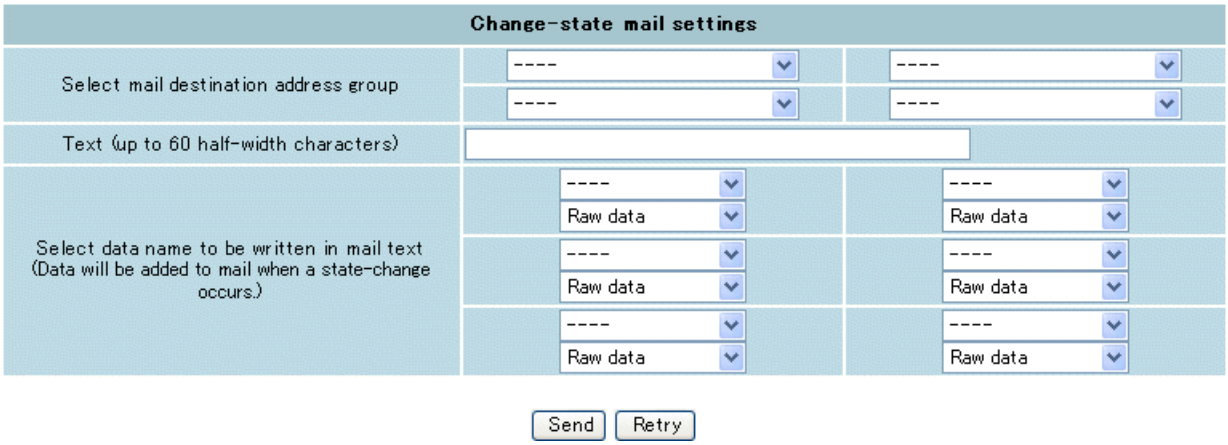
Setting item	Description
Event name	Set an event name at the time when the state changes and name at the time when restored within 20 half-width characters long. Note: The following characters are not available: , $ & % " '
Enable event log	If this checkbox is set to ON, this data is collected and recorded. 1000 occurrences of the event are held. What are recorded as a event log are as follows: • Date/time of occurrence of the event: year, month, day, hour, minute, and second • Data value of the controller data in which an event has occurred
Enable mail sending	If this checkbox is set to ON, an e-mail is sent to a specified mail address group when the condicitons are met. The contents of the mail can be set in the "Change-state mail settings" described later.
Controller data write setting	When an event occurs, a set value is written to a specified controller data. Writing of data is performed only when the event occurs. The value to be written must match the data type of the destination controller data.
H h limit value	If the integral value exceeds a value set here, an event of "high high limit value" occurs.
H limit value	If the integral value exceeds a value set here, an event of "high limit value" occurs.
L limit value	If the integral value exceeds a value set here, an event of "low limit value" occurs.
L l limit value	If the integral value exceeds a value set here, an event of "low low limit value" occurs.
Hysteresis value	For each high high limit value, high limit value, low limit value and low low limit value, set a hysteresis value for a change in the controller data. Each set value subtracted by the value defined here is the recovery value.

Section 4 WEB Module Setting

4-3 WEB Observation System

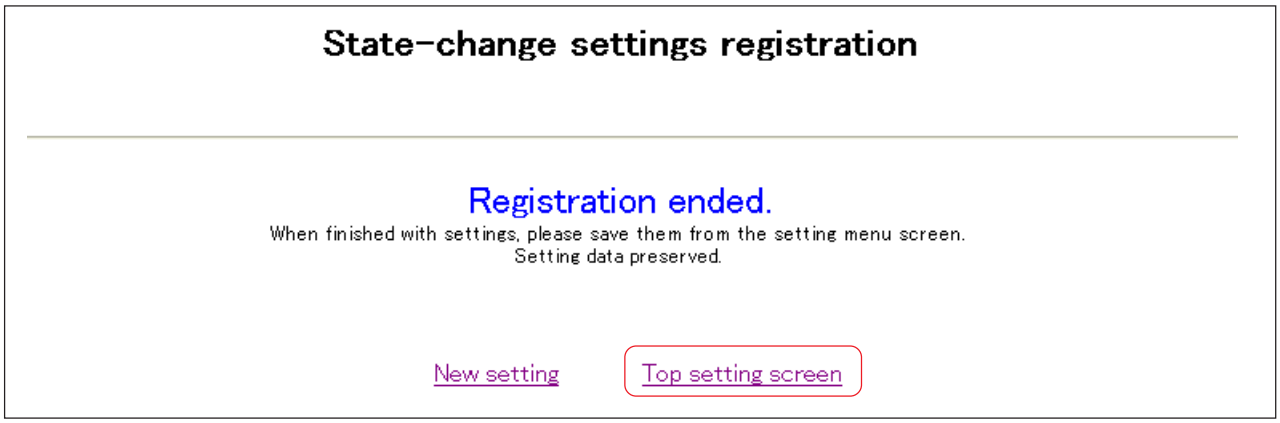
(3) Change-state mail settings

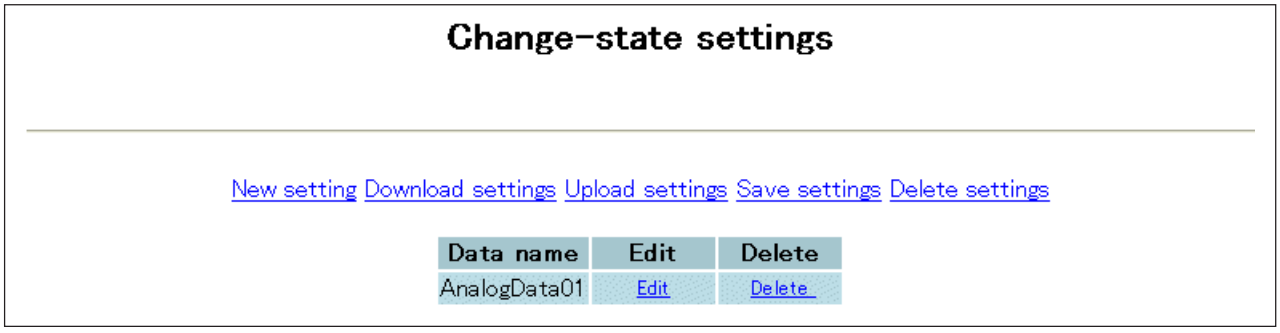
When an event occurs, mails can be sent to a specified mail address group.
The change-state mail setting box is displayed below the event setting box.


Change-state mail settings
Select mail destination address group
Text (up to 60 half-width characters)
Select data name to be written in mail text (Data will be added to mail when a state-change occurs.)
Raw data
Send
Retry

Setting item	Description
Select mail destination address group	Select mail address groups to which mails are sent when an event occurs.
Text	Create mail text within 60 half-width characters long.
Select data name to be written in mail text	Values at the time of occurrence of an event can be written to the mail text. Up to 6 items of controller data can be set.

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue the state-change setting, click the [New setting] button.
If you click the [Setting top screen], the set data are displayed.


State-change settings registration
Registration ended.
When finished with settings, please save them from the setting menu screen.
Setting data preserved.
New setting
Top setting screen



◆ To save the change-state settings registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

Section 4 WEB Module Setting

4-3 WEB Observation System

<Other functions on the change-state setting page>

1) Download settings
   Data registered on the change-state setting page is downloaded to a file in the personal computer in the CSV format.
   Default name: ALARM_DT. CSV

2) Upload settings
   Data about change-state settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
   Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
   All the set data are deleted.

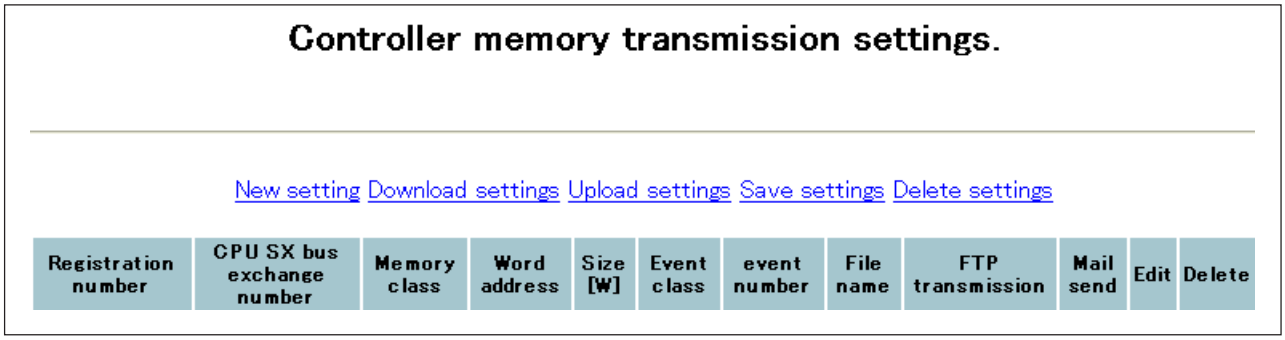
Section 4 WEB Module Setting

4-3 WEB Observation System

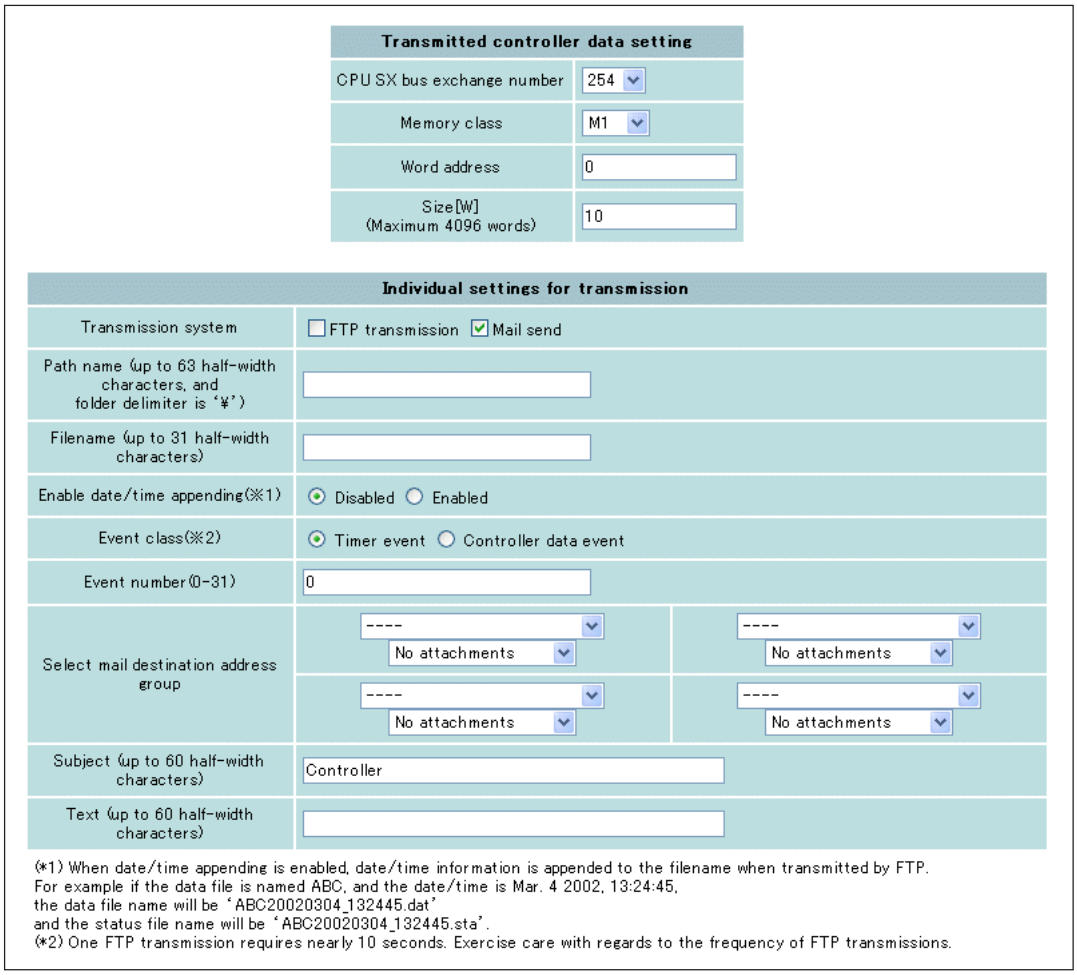
4-3-7 Controller memory transmission settings

The memory in the SPH_CPU is transmitted to FTP or as an e-mail attachment.

◆ Click the [Controller memory transmission settings] on the “Observation setting menu” page to display the “Controller memory transmission settings” page.



◆ Click the [New setting] on the “Controller memory transmission settings” page to display the setting page shown below.


Transmitted controller data setting
CPU SX bus exchange number
254
Memory class
M1
Word address
0
Size[W]
(Maximum 4096 words)
10
Individual settings for transmission
Transmission system
FTP transmission
Mail send
Path name (up to 63 half-width characters, and folder delimiter is '¥')
Filename (up to 31 half-width characters)
Enable date/time appending(※1)
Disabled
Enabled
Event class(※2)
Timer event
Controller data event
Event number(0-31)
0
Select mail destination address group

No attachments
Subject (up to 60 half-width characters)
Controller
Text (up to 60 half-width characters)
(*1) When date/time appending is enabled, date/time information is appended to the filename when transmitted by FTP.
For example if the data file is named ABC, and the date/time is Mar. 4 2002, 13:24:45,
the data file name will be 'ABC20020304_132445.dat'
and the status file name will be 'ABC20020304_132445.sta'.
(*2) One FTP transmission requires nearly 10 seconds. Exercise care with regards to the frequency of FTP transmissions.

Setting item	Description
Transmitted controller data setting	Specify data to be transmitted by setting "CPU SX bus exchange No.", "Memory class, "Word address" and "Size". * Available memory classes are as follows: M1: Standard memory, M3: Retain memory, and M10: System memory * For the size, up to 4096 words can be specified. However, be sure not to exceed each memory boundary.
Transmission system	Choose between FTP transmission or transmission as an e-mail attachment. It is possible to choose both.

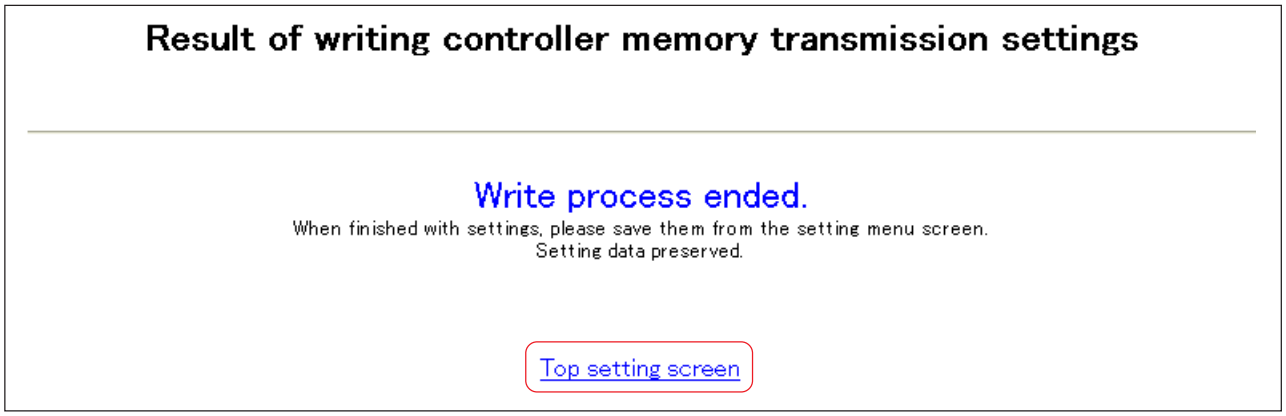
Section 4 WEB Module Setting

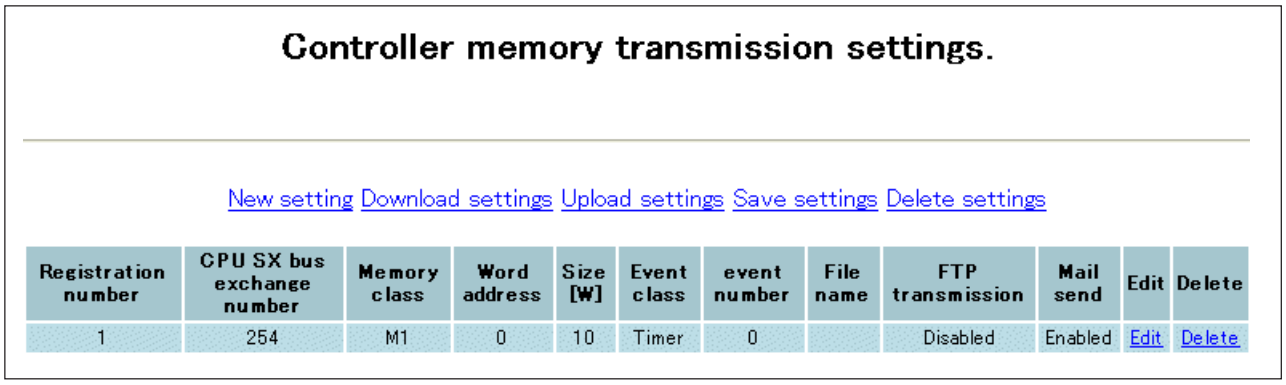
4-3 WEB Observation System

Path name (Note)	For FTP transmission, specify a destination file. Set a relative path name from the route path of the external FTP server. The path name can be up to 63 half-width characters. Use "\" as folder delimiters.
Filename (Note)	Set a filename used in the destination external FTP server within 31 half-width characters long. No extension is required.
Enable date/time appending	If "Enable" is selected, date and time data (calendar data of the CPU module) is appended to the filename. For example, when the filename is "ABC" and a date and time is "October 10, 2004 10:32:36," Data file: "ABC20041010_153236.dat" Status file: "ABC20041010_153236.sta"
Event class	Set a timing of data transmission to the FTP server. Choose between the following two transmission types: Timer event: Data is periodically transmitted by the timer. Controller event: Data is transmitted when its state changes. The settings for data actually used as the timer and trigger are performed on the "SX-WEB system settings" page described later. Up to 32 event flags can be set. What number event flag is used is specified here.
Event number	
Select mail destination address group	Select a mail address group to which mails are sent and specify whether a file is attached or not.
Subject	Set a mail subject within 31 half-width characters long.
Text	Set mail text within 60 half-width characters long.

Note: The following characters are not available: , $ & % ” ’

◆ After setting all necessary items, click the [Send] button to display the page shown below.
When you want to continue the controller memory transmission setting, click the [New setting] button.
If you click the [Top setting screen], the set data are displayed.


Result of writing controller memory transmission settings
Write process ended.
When finished with settings, please save them from the setting menu screen.
Setting data preserved.
Top setting screen



◆ To save the controller memory transmission settings registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

Section 4 WEB Module Setting

4-3 WEB Observation System

<Other functions on the controller memory transmission setting page>

1) Download settings
   Data registered on the controller memory transmission setting page is downloaded to a file in the personal computer in the CSV format.
   Default name: CDT_TRN. CSV

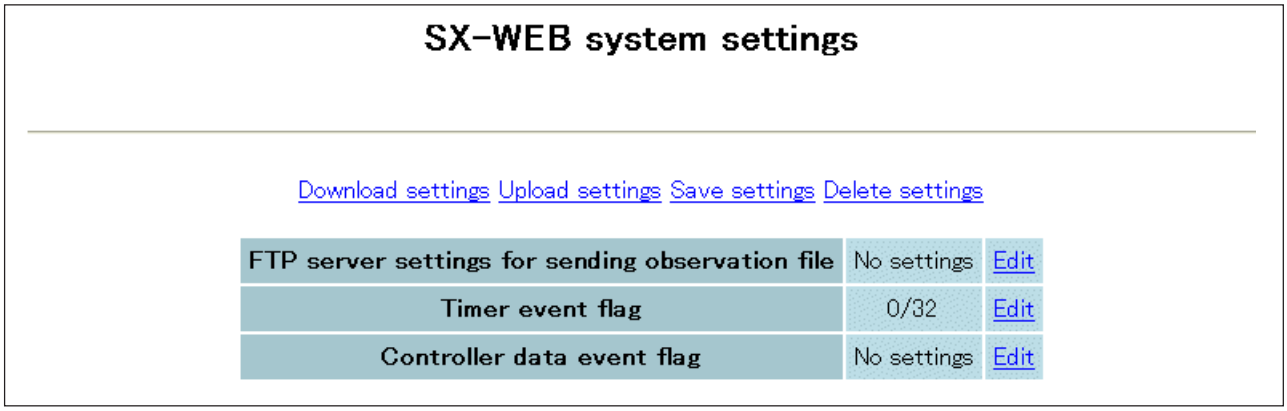
2) Upload settings
   Data about controller memory transmission settings that have previously been stored in the file (in “1) Download settings”) is read to the WEB module.
   Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings
   All the set data are deleted.

4-3-8 SX-WEB system settings

Set the FTP server for sending observation files, timer event flag and controller data event flag.

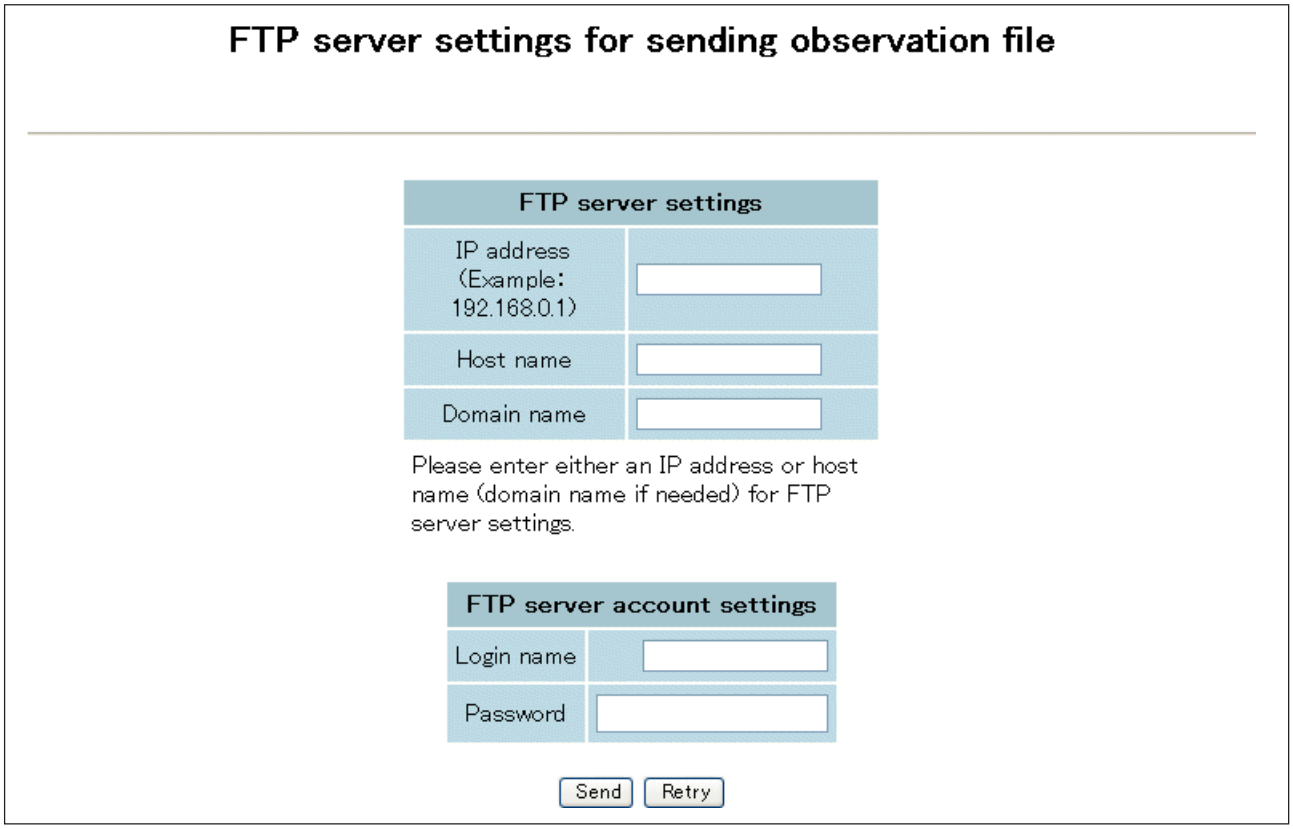
◆ Click the [SX-WEB system settings] on the “Observation setting menu” page to display the page shown below.



(1) FTP server settings for sending observation file

Set the destination FTP server.

◆ Click the [Edit] for “FTP server settings for sending observation file” on the “SX-WEB system settings” page to display the page shown below.


FTP server settings for sending observation file
FTP server settings
IP address (Example: 192.168.0.1)
Host name
Domain name
Please enter either an IP address or host name (domain name if needed) for FTP server settings.
FTP server account settings
Login name
Password
Send
Retry

4-3 WEB Observation System

Setting item	Description
IP address	Set an IP address of the FTP server.
Host name	Set a host name of the FTP server within 15 half-width characters long. When the IP address is set, it is not necessary to set this item.
Domain name	Set a domain name of the FTP server if necessary.
FTP server account setting - Login name	Set a login name to check users who access the FTP server within 31 half-width characters long.
FTP server account setting - Password	Set a password to check users who access the FTP server within 31 half-width characters long.

◆ After setting all necessary items, click the [Send] button to display the page to inform you of the completion of the writing. If you click the [Top setting screen], the set data are displayed.

(2) Timer event flag settings

Set a occurrence period of timer event flag. Up to 32 timer event flags can be set. The interval between events can be set within the range of 1s to 10000s. When setting at “0”, no event occurs.

◆ Click the [Edit] for “Timer event flag” on the “SX-WEB system settings” page to display the page shown below.

Timer event flag settings

Timer number	Event interval[s](※)	Timer number	Event interval[s](※)
00	1000	16	0
01	3600	17	0
02	28800	18	0
03	0	19	0
04	0	20	0
05	0	21	0
06	0	22	0
07	0	23	0
08	0	24	0
09	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	0

(*) Event intervals can be set to 1-100000[s]. If set to 0, the event will not fire.

◆ After setting all necessary items, click the [Send] button to display the page to inform you of the completion of the writing. If you click the [Top setting scree], the set data are displayed.

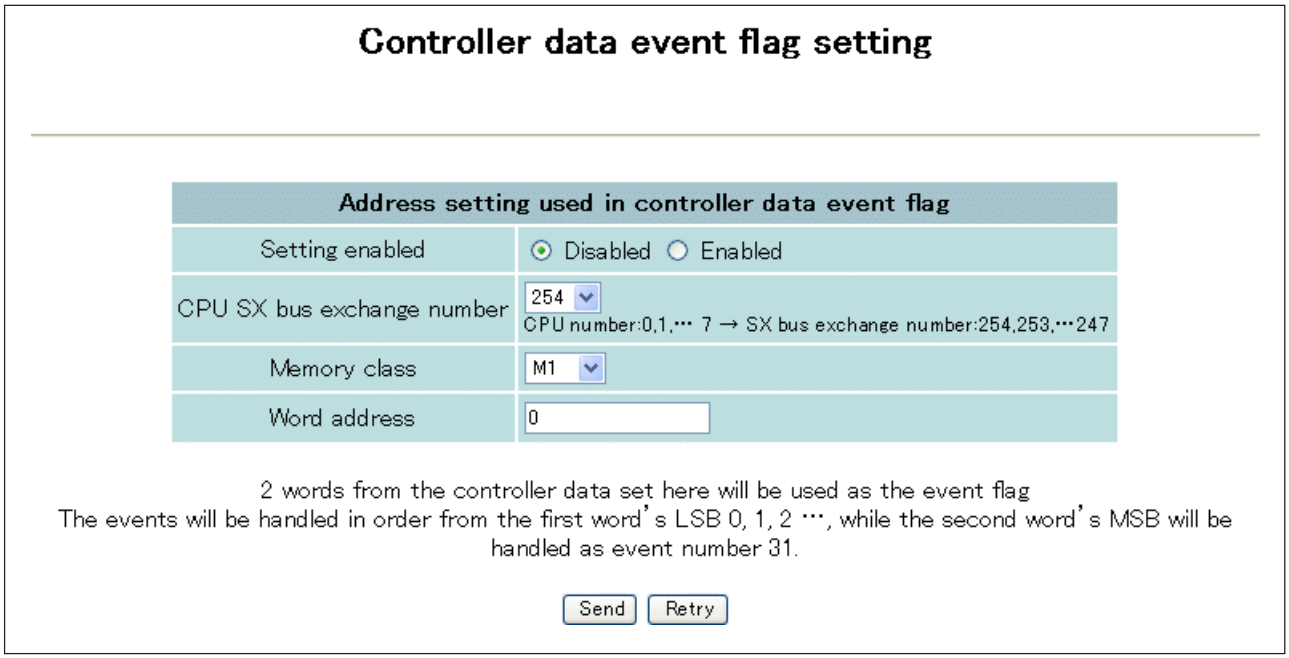
Section 4 WEB Module Setting

4-3 WEB Observation System

(3) Controller data event flag setting

Designate a memory in the SPH_CPU as an event occurrence flag

◆ Click the [Edit] for “Controller data event flag” on the “SX-WEB system settings” page to display the page shown below.


Controller data event flag setting
Address setting used in controller data event flag
Setting enabled
Disabled
Enabled
CPU SX bus exchange number
254
CPU number:0,1,··· 7 → SX bus exchange number:254,253,···247
Memory class
M1
Word address
0
2 words from the controller data set here will be used as the event flag
The events will be handled in order from the first word's LSB 0, 1, 2 ···, while the second word's MSB will be handled as event number 31.
Send
Retry

Setting item	Description
Setting enabled	Select "enable" to set a memory in the SX_CPU as an event flag.
CPU SX bus exchange No.	Set the SX bus exchange No. of the target CPU. For CPU0, select 254.
Memory class	Set a memory in the CPU. Available memory classes are as follows: M1: Standard memory, M3: Retain memory, and M10: System memory
Word address	Set a word address. Two words (32 points) from the controller data set here (the set word address and the following address) are reserved as an event flag.

*** Details of controller event flag**

Event No.

Set word address ⇨	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16

* The set word address and the following address are occupied as the controller event flag.

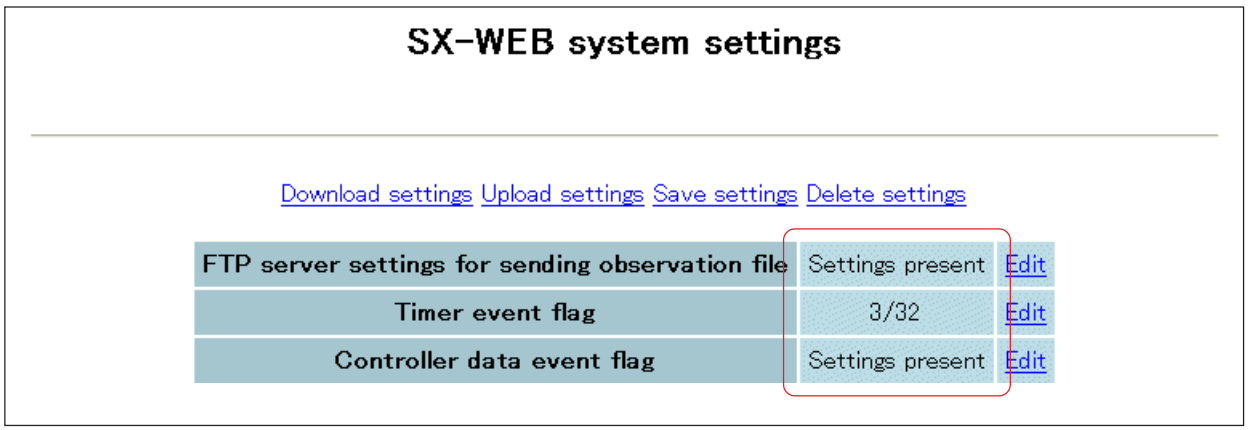
Occurrence of event: An event occurs when the bit corresponding to the event No. that is set in the WEB module is set ON from an application. This area is loaded into the WEB module every one second.

End of event: When an event ends (data is transmitted to the FTP server), the WEB module resets the flag of the corresponding event No.

Section 4 WEB Module Setting

4-3 WEB Observation System

◆ After setting all necessary items, click the [Send] button to display the page to inform you of the completion of the writing. If you click the [Top setting screen], the set data are displayed.



◆ To save the settings registered, click the “Save settings”. A message appears saying “Setting data was saved to flash memory.” and the setting data is stored in the WEB module.

<Other functions on the SX-WEB system setting page>

1) Download settings

Data registered on the SX-WEB system setting page is downloaded to a file in the personal computer in the CSV format.
Default name: SX_SYS. CSV

2) Upload settings

The setting data that have previously been stored in the file (in “1) Download settings”) is read.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings

All the set data are deleted.

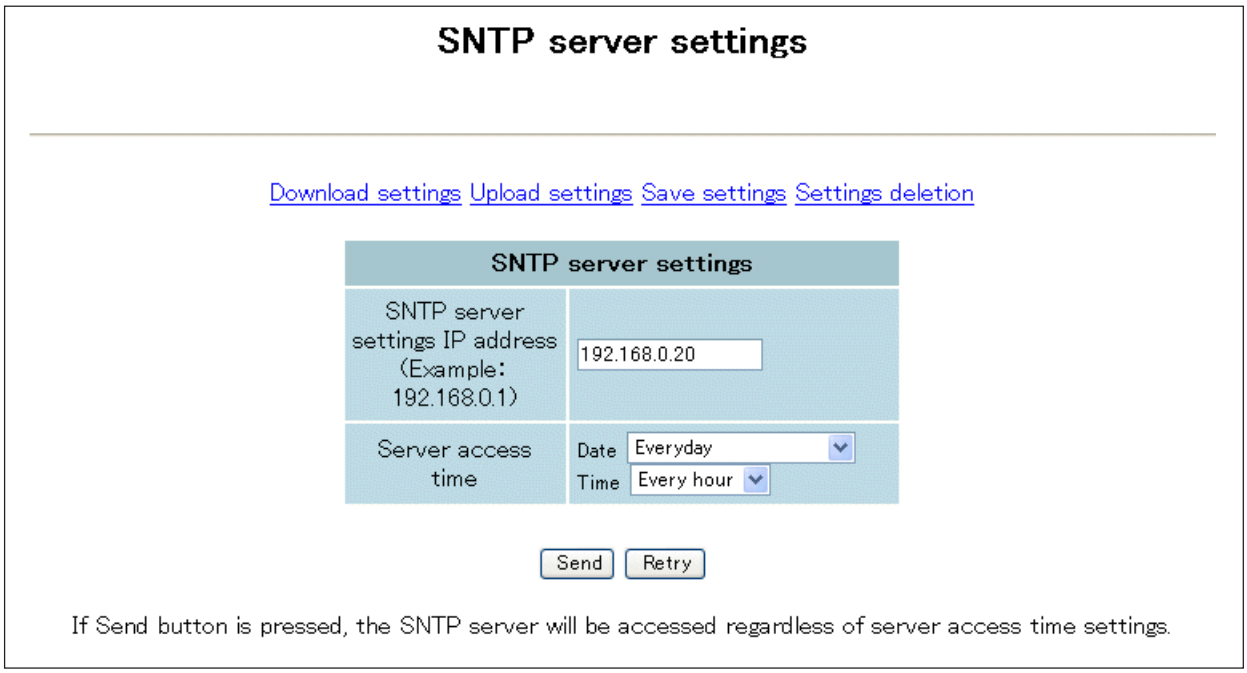
Section 4 WEB Module Setting

4-3 WEB Observation System

4-3-9 SNTP server settings

The calendar data in the SPH_CPU is corrected by accessing the external SNTP server.

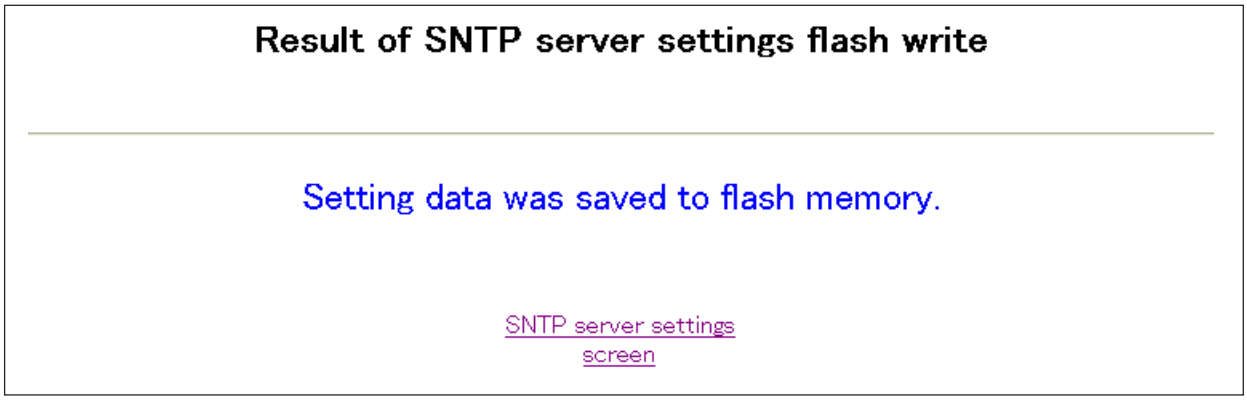
◆ Click the [SNTP server settings] on the “Observation setting menu” page to display the setting page shown below.


SNTP server settings
Download settings Upload settings Save settings Settings deletion
SNTP server settings
SNTP server settings IP address (Example: 192.168.0.1)
192.168.0.20
Server access time
Date Everyday
Time Every hour
Send
Retry
If Send button is pressed, the SNTP server will be accessed regardless of server access time settings.

Setting item	Description
SNTP server settings IP address	Set an IP address of the SNTP server.
Server access time	At intervals of the specified time, the time is corrected by accessing SNTP server.

◆ To save the settings registered, click the “Save settings”. A message appears saying “The set data was saved to the flash memory” and the set data is stored in the WEB module.

* If you click the [Send] button, you can immediately access the SNTPserver.



<Other functions on the SNTP server setting page>

1) Download settings

Data registered on the setting page is downloaded to a file in the personal computer in the CSV format.
Default name: NTP_SET. CSV

2) Upload settings

The setting data that have previously been stored in the file (in “1) Download settings”) is read.
Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.

3) Delete settings

All the set data are deleted.

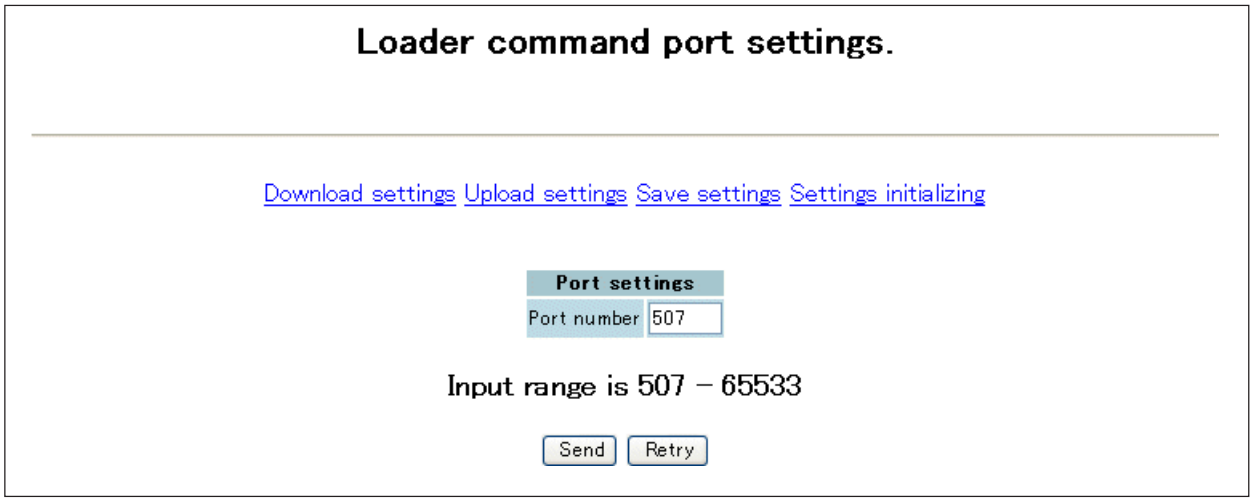
Section 4 WEB Module Setting

4-3 WEB Observation System

4-3-10 Loader command port settings

When connecting D300win loader via the Internet or intranet, set the communication port of the WEB module for connecting D300win.

◆ Click the [Loader command port settings] on the “Observation setting menu” page to display the setting page shown below.



◆ Set the port number in the range of 507 to 65533, and then click the [Send] button to display the page shown below.

Note: The port whose No. is the set port No. plus 2 is occupied. For example, if you set the port No. at 507, the port Nos. 507 and 509 are occupied.

Result of writing loader command port settings
Write process ended.
When done with settings, please save them from the setting menu screen.
Setting data preserved.
Top setting screen

◆ Clicking the [Top setting screen] returns you to the “Loader command port settings” page. Click the “Save settings” to write the set data into the flash memory of the WEB module.

<Other functions on the loader command port setting page>

1) Download settings
   Data registered on the setting page is downloaded to a file in the personal computer in the CSV format.
   Default name: LCP_SET. CSV
2) Upload settings
   The setting data that have previously been stored in the file (in “1) Download settings”) is read.
   Note: Do not edit the CSV file downloaded. Do not upload a CSV file edited with EXCEL, etc.
3) Delete settings
   All the set data are deleted.

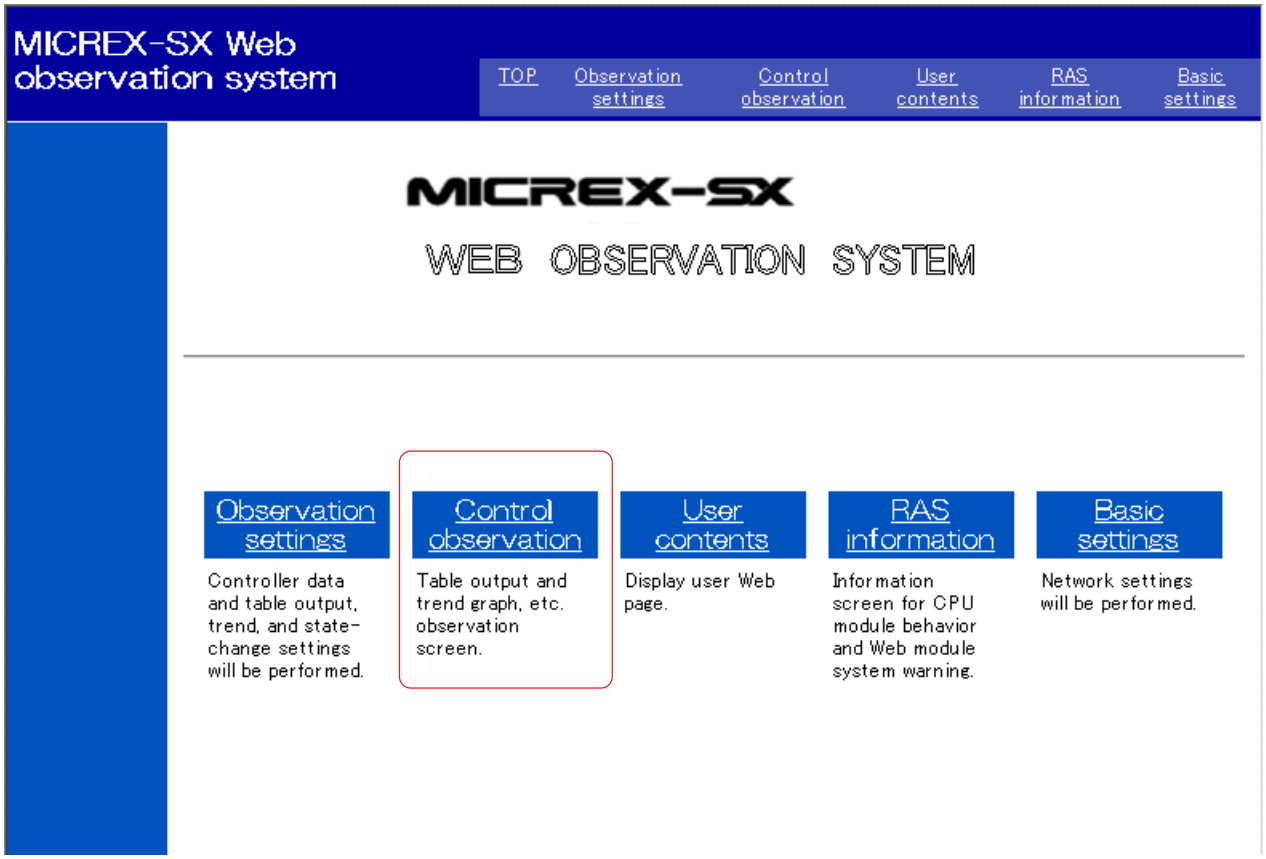
Section 5 WEB Module Operation

To operate the WEB system, use the following three functions of the WEB module:

- Observation on the WEB screen
- Generating an alarm via e-mail
- Data transmission via FTP

5-1 Data Observation on Standard WEB Observation Page

◆ Activate a browser of the personal computer for setting, and access the WEB module. The initial screen of the “WEB observation system” is displayed as shown below. *

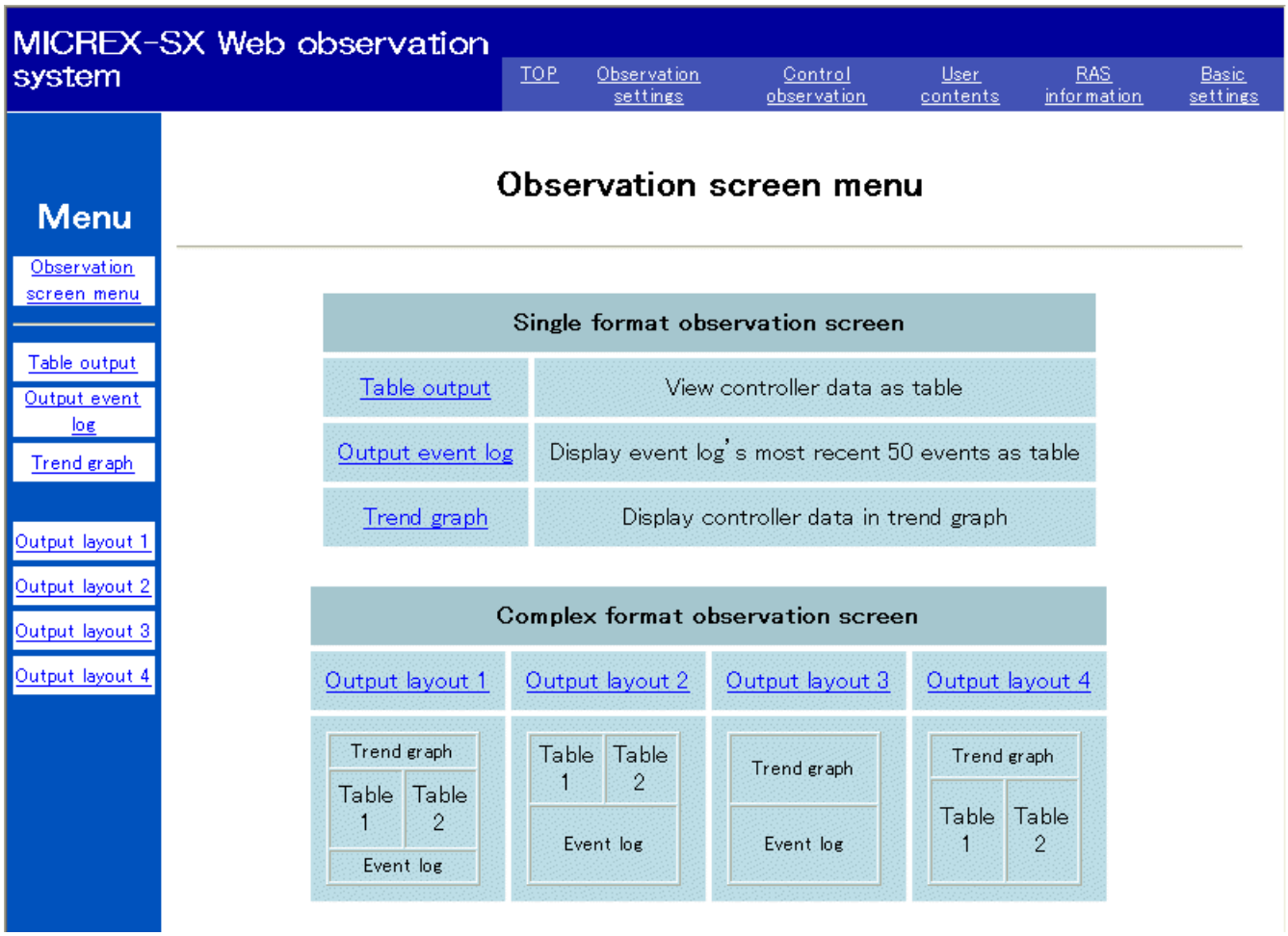


* The IP address of the WEB module is a address specified in “4-2-4 Network setup - Host setup”. By default, this is set at “192.168.0.1” and the subnet mask is set at “255. 255. 255. 0”.

Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

◆ Click the [Control observation] on the screen to display the “Observation screen manu” screen is displayed.



5-1-1 Observation screen menu

On the “observation screen menu” screen, select the display format of the observation screen.

(1) Single format observation screen

- Table output ..... One table is displayed on the observation screen.
- Output event log ..... One event log is displayed on the observation screen.
- Trend graph ..... One trend graph is displayed on the observation screen.

(2) Complex format observation screen

- Output layout 1 ..... One trend graph, two tables and one event log are displayed on the observation screen.
- Output layout 2 ..... Two tables and one event log are displayed on the observation screen.
- Output layout 3 ..... One trend graph and one event log are displayed on the observation screen.
- Output layout 4 ..... One trend graph and two tables are displayed on the observation screen.

Section 5 WEB Module Operation

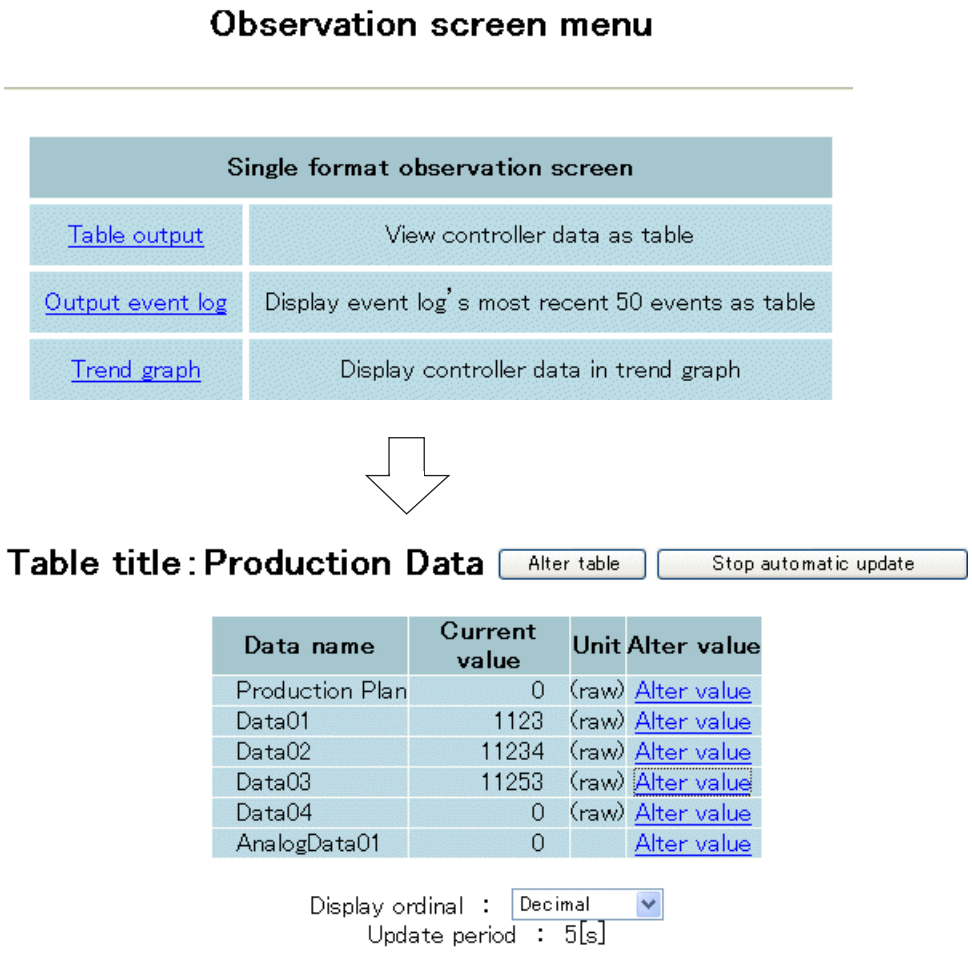
5-1 Data Observation on Standard WEB Observation Page

5-1-2 Single format observation screen - Table output

(1) Display

Only one table is displayed on the observation screen.

◆ Click the “Table output” on the “observation setting menu” screen to display the tables registered in the “Table output settings”.



<Display specifications>

Display item	Description
Data name	The name of the controller data is displayed.
Current value	Values of the controller data are displayed. When data cannot be acquired, "\Not acquired\" is displayed, and when data acquisition results in failure, "\Acquisition failed\" is displayed.
Unit	For raw data: "raw" For integrated value: "product" For industry type: The set unit is displayed.
Alter value	The controller data is rewritten from the observation screen.
Display ordinal	The display of the controller data is switched between decimal and hexadecimal.
Update period	The update period set in the "table output settings" is displayed.
[Alter table] button	The table currently displayed on the observation screen is switched to another table.
[Start/Begin automatic update] button	The automatic update of a value of the controller data can be enabled or disabled.

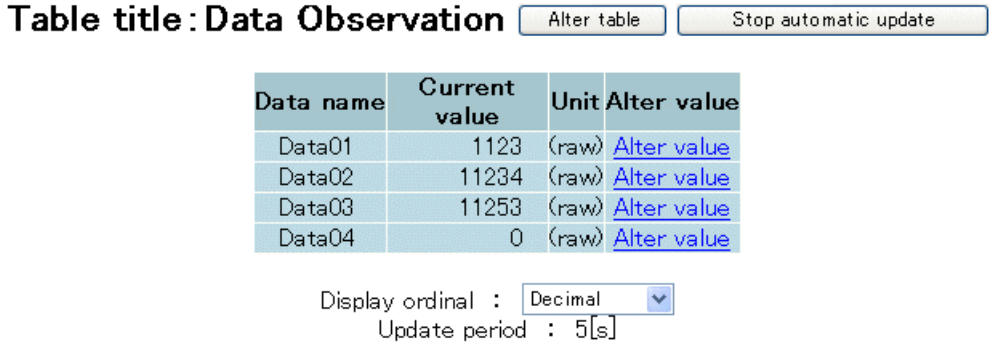
Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

(2) Switching displayed table

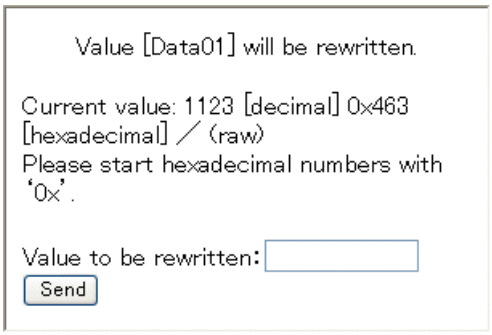
◆ Click the [Alter table] button to display the [Alter table] screen.

◆ Select a table from the menu box and click the [Done] button. The selected table is displayed on the observation screen.

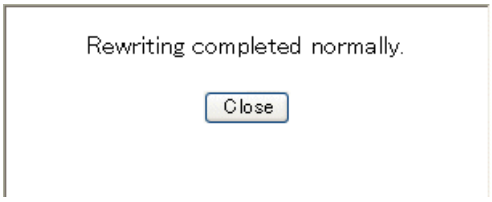


(3) Altering a value

◆ Click the [Alter value] on the table to display the screen to rewrite the selected controller data.


Value [Data01] will be rewritten.
Current value: 1123 [decimal] 0x463 [hexadecimal] / (raw)
Please start hexadecimal numbers with '0x'.
Value to be rewritten:
Send

◆ After altering the value, click the [Send] button. The value of the controller data is altered and the following screen is displayed.



Note: Only values of memory in the CPU0 can be altered.

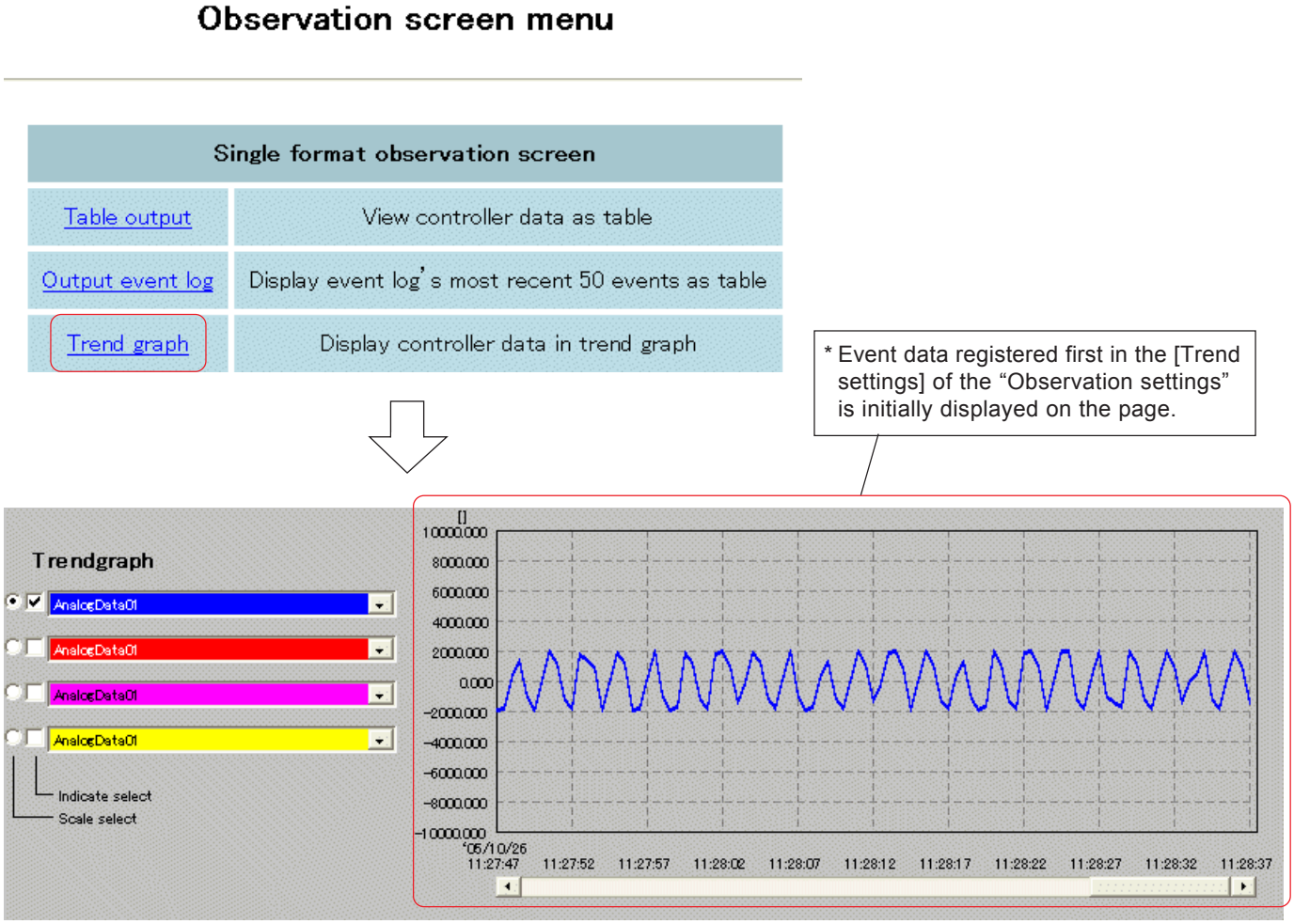
Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

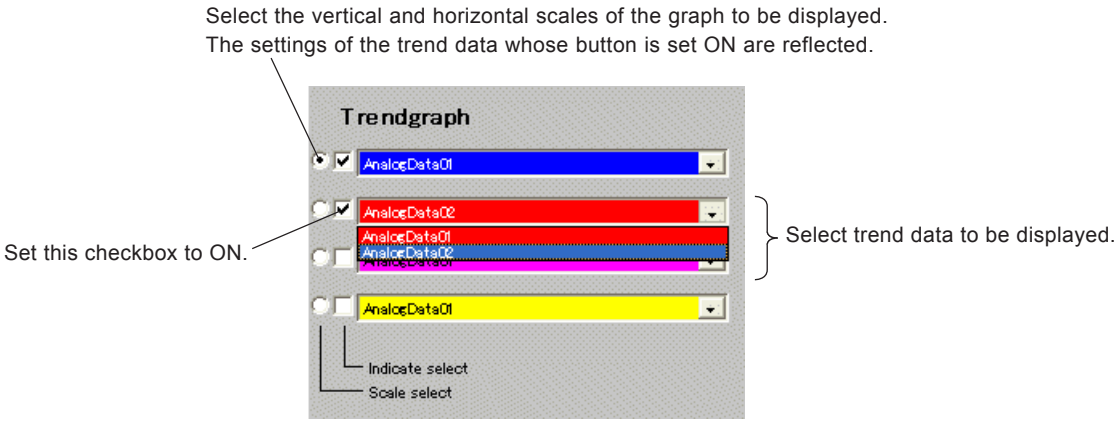
5-1-3 Single format observation screen - Trend graph

Only one trend graph is displayed on the observation screen.

◆ Click the “Trend graph” on the observation screen menu. The controller data registered in the “Trend settings” is displayed on a trend graph.



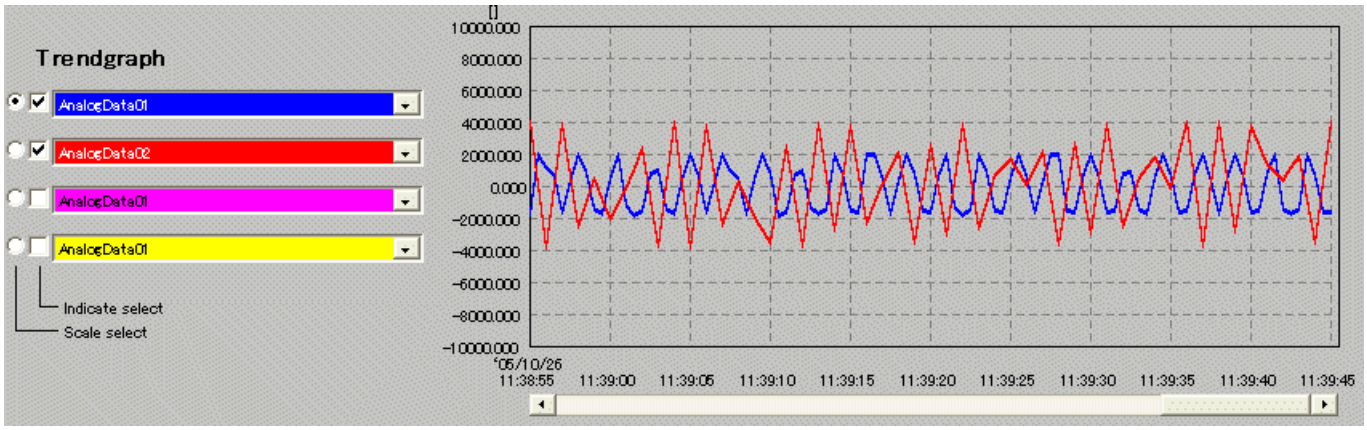
◆ Select trend data that you want to display on the trend graph. For the trend data, data registered in the [Trend settings] of the “Observation settings” can be selected.



Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

◆ The selected trend data is displayed.



5-1-4 Single format observation screen - Output event log

(1) Display

The detection status of the event logs that are set in the [Change-state settings] of the “Observation settings” is displayed on the list.

◆ Click the “Output event log” on the observation screen menu to display events that have occurred.

Event log

Download 1000 entries

Date	Data name	value	Unit	Event	Integrated value
2005/10/26 11:54:16	AnalogData01	1854		H h limit alarm	
2005/10/26 11:54:16	AnalogData01	1854		H limit alarm	
2005/10/26 11:54:16	AnalogData01	1854		L limit recovery	
2005/10/26 11:54:16	AnalogData01	1854		L l limit recovery	
2005/10/26 11:54:15	AnalogData01	-1148		L l limit alarm	
2005/10/26 11:54:15	AnalogData01	-1148		L limit alarm	
2005/10/26 11:54:14	AnalogData01	72		L limit recovery	
2005/10/26 11:54:14	AnalogData01	72		L l limit recovery	
2005/10/26 11:54:12	AnalogData01	-228		L l limit alarm	
2005/10/26 11:54:12	AnalogData01	-228		L limit alarm	
2005/10/26 11:54:12	AnalogData01	-228		H limit recovery	
2005/10/26 11:54:12	AnalogData01	-228		H h limit recovery	
2005/10/26 11:54:11	AnalogData01	1272		H h limit alarm	
2005/10/26 11:54:11	AnalogData01	1272		H limit alarm	
2005/10/26 11:54:11	AnalogData01	1272		L limit recovery	
2005/10/26 11:54:11	AnalogData01	1272		L l limit recovery	

<Display specifications>

Display item	Description
Date	A calendar value at the time when an event occurs is displayed. The displayed data is a calendar value in the SPH_CPU.
Data name	The name of the cotroller data is displayed.
Value	Controller data at the time when an event occurs is displayed.
Unit	The unit set in the controller data settings is displayed.
Event	The event log name set in the change-state settings is displayed.
Integrated value	On/on times of the BOOL-type data during state change is displayed. For events to be displayed, it is necessary to set the [enable integrals] and [enable event log] to ON.

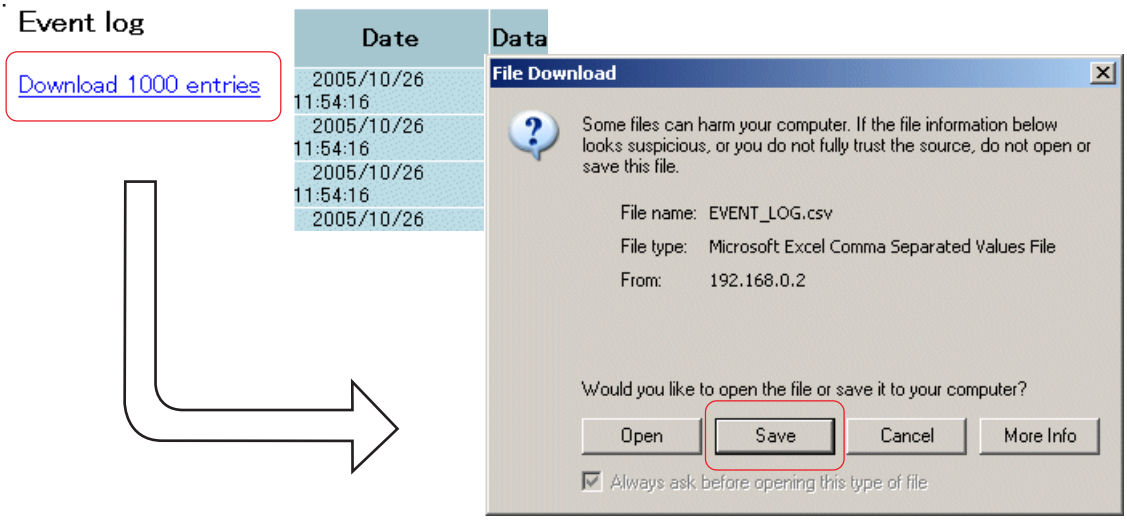
Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

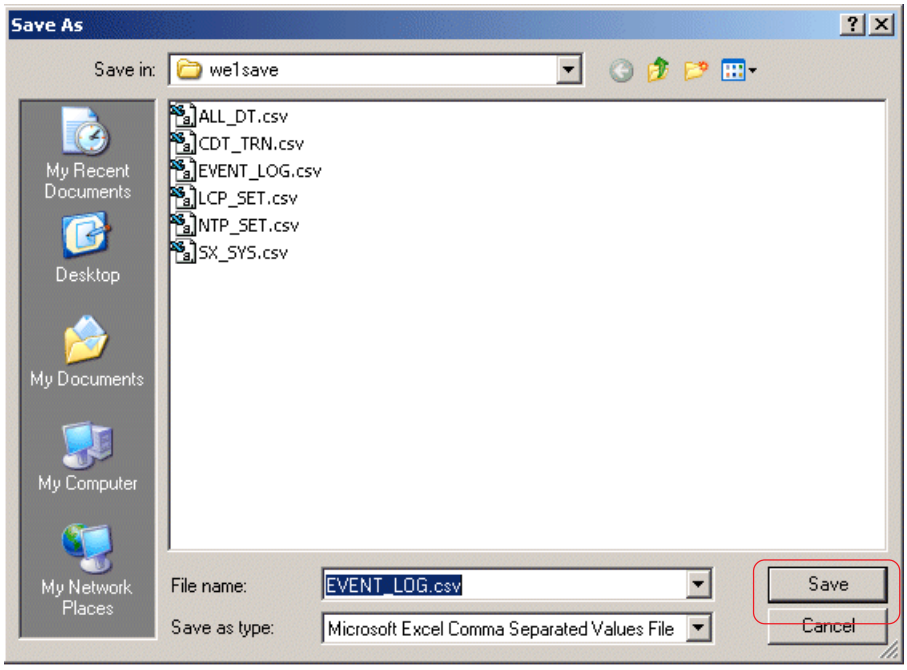
(2) Downloading event logs

Up to 1000 items of event log information are stored in the WEB module. These event log data can be downloaded to a specified file in the personal computer.

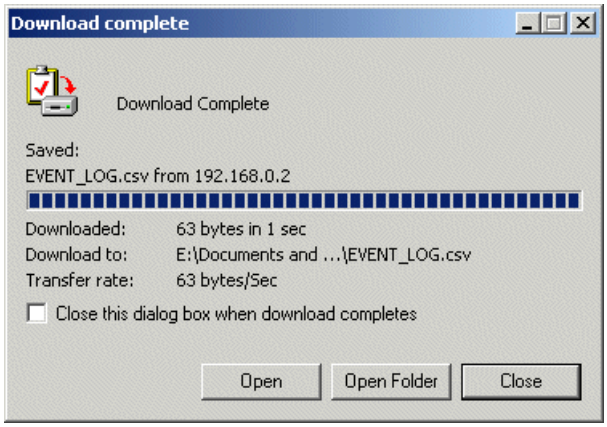
◆ Click the [Download 1000 entries] to display the [File Download] dialog.


Event log
Download 1000 entries
Date
Data
2005/10/26 11:54:16
2005/10/26 11:54:16
2005/10/26 11:54:16
2005/10/26
File Download
Some files can harm your computer. If the file information below looks suspicious, or you do not fully trust the source, do not open or save this file.
File name: EVENT_LOG.csv
File type: Microsoft Excel Comma Separated Values File
From: 192.168.0.2
Would you like to open the file or save it to your computer?
Open
Save
Cancel
More Info
Always ask before opening this type of file

◆ Click the [Save] button to display the [Save As] dialog.
Default filename is “EVENT_LOG.csv”. Enter an arbitrary filename and click the [Save] button to start download.



◆ When download is completed, the [Download complete] dialog is displayed.



Section 5 WEB Module Operation

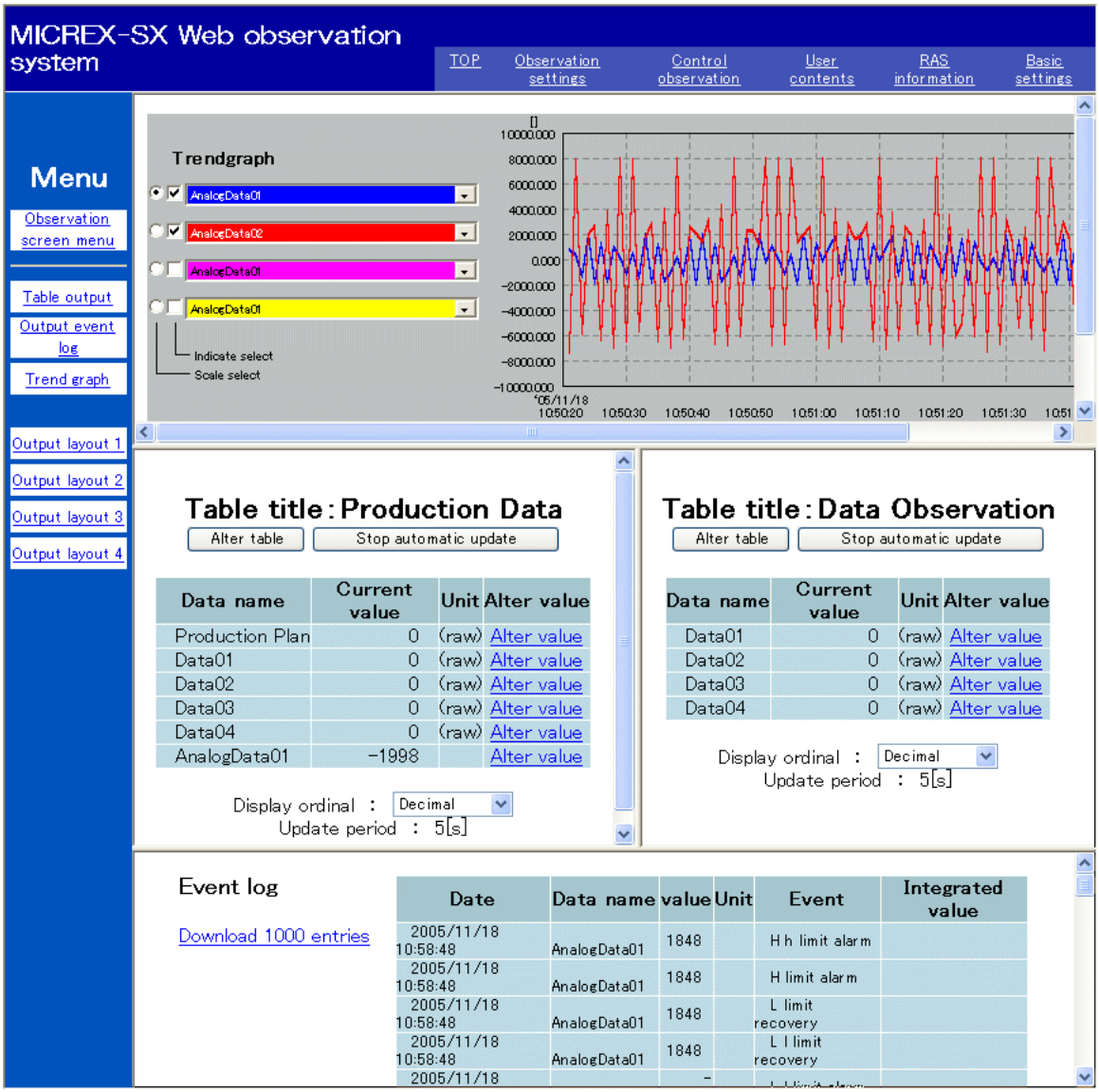
5-1 Data Observation on Standard WEB Observation Page

5-1-5 Complex format observation screen

On the observation screen, multiple contents (table, trend graph, event log) can be displayed at the same time. You can select the layout from among the following four formats.

(1) Layout output 1

One trend graph, two tables and one event log are displayed.
* Partition lines between contents can be moved by dragging them.

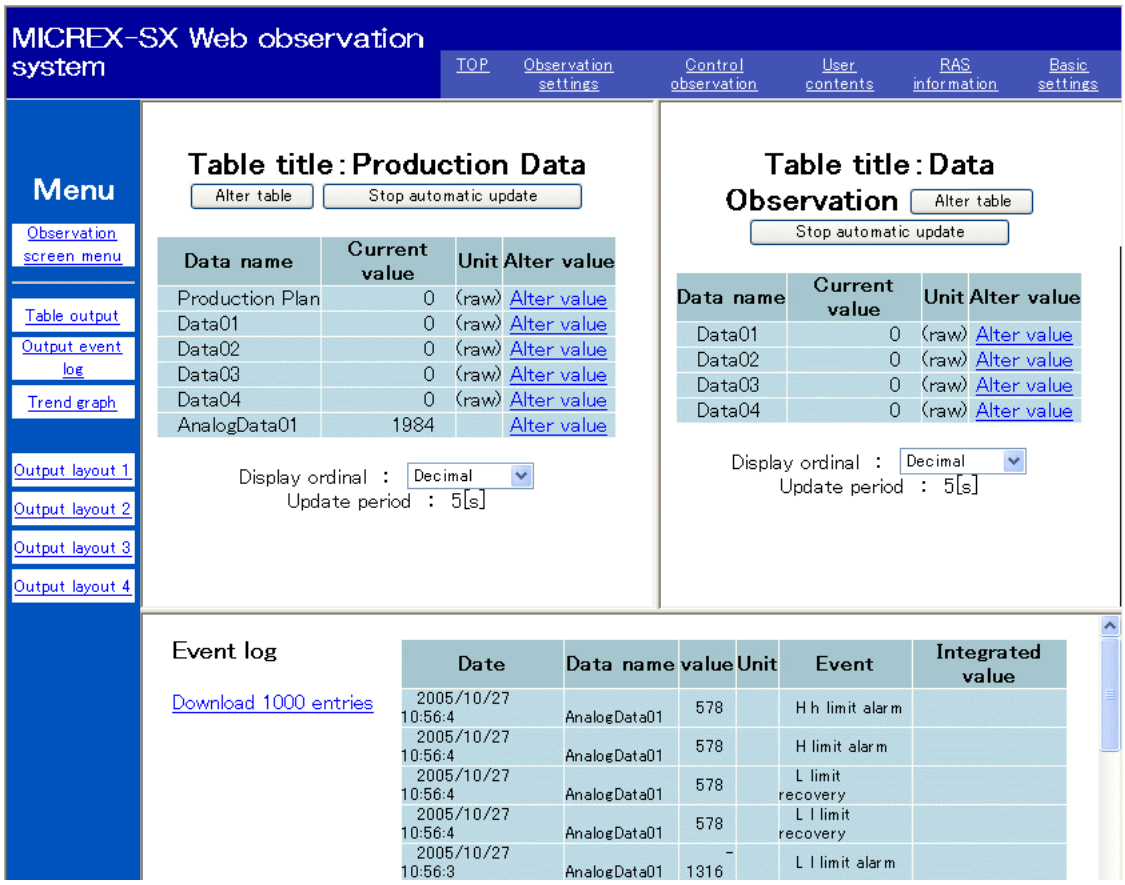


Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

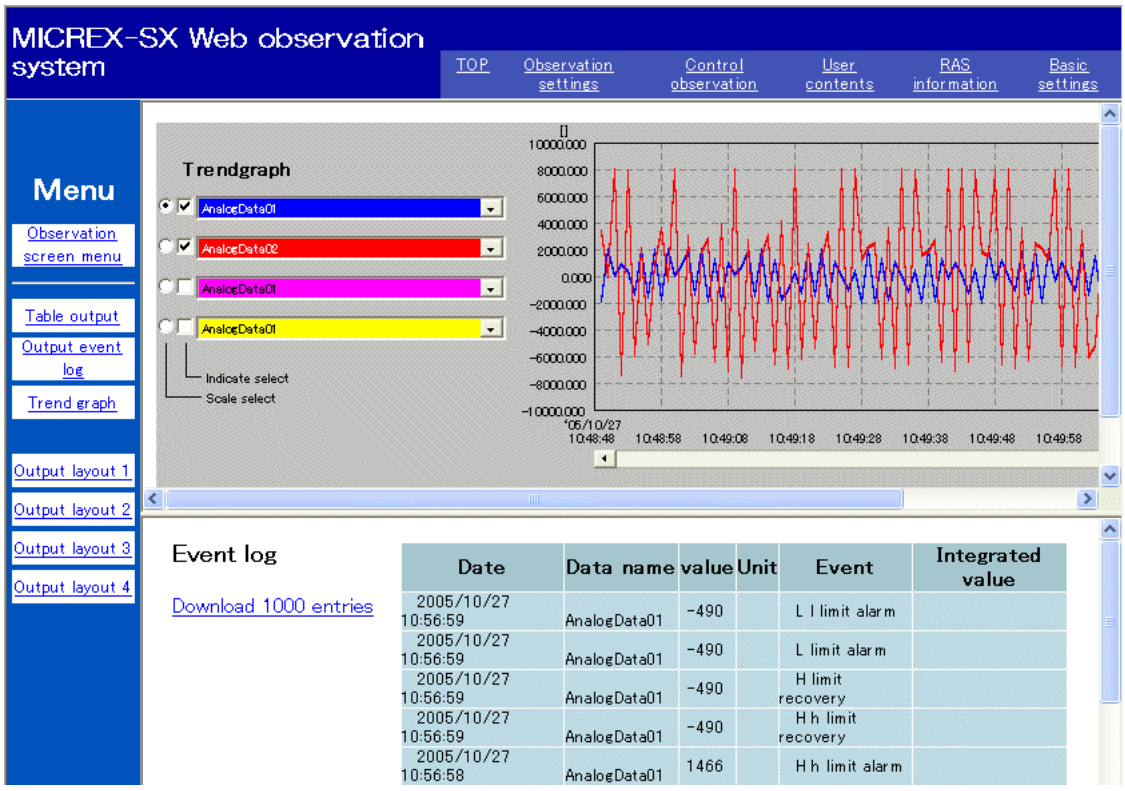
(2) Layout output 2

Two tables and one event log are displayed.
* Partition lines between contents can be moved by dragging them.



(3) Layout output 3

One trend graph and one event log are displayed.
* Partition lines between contents can be moved by dragging them.

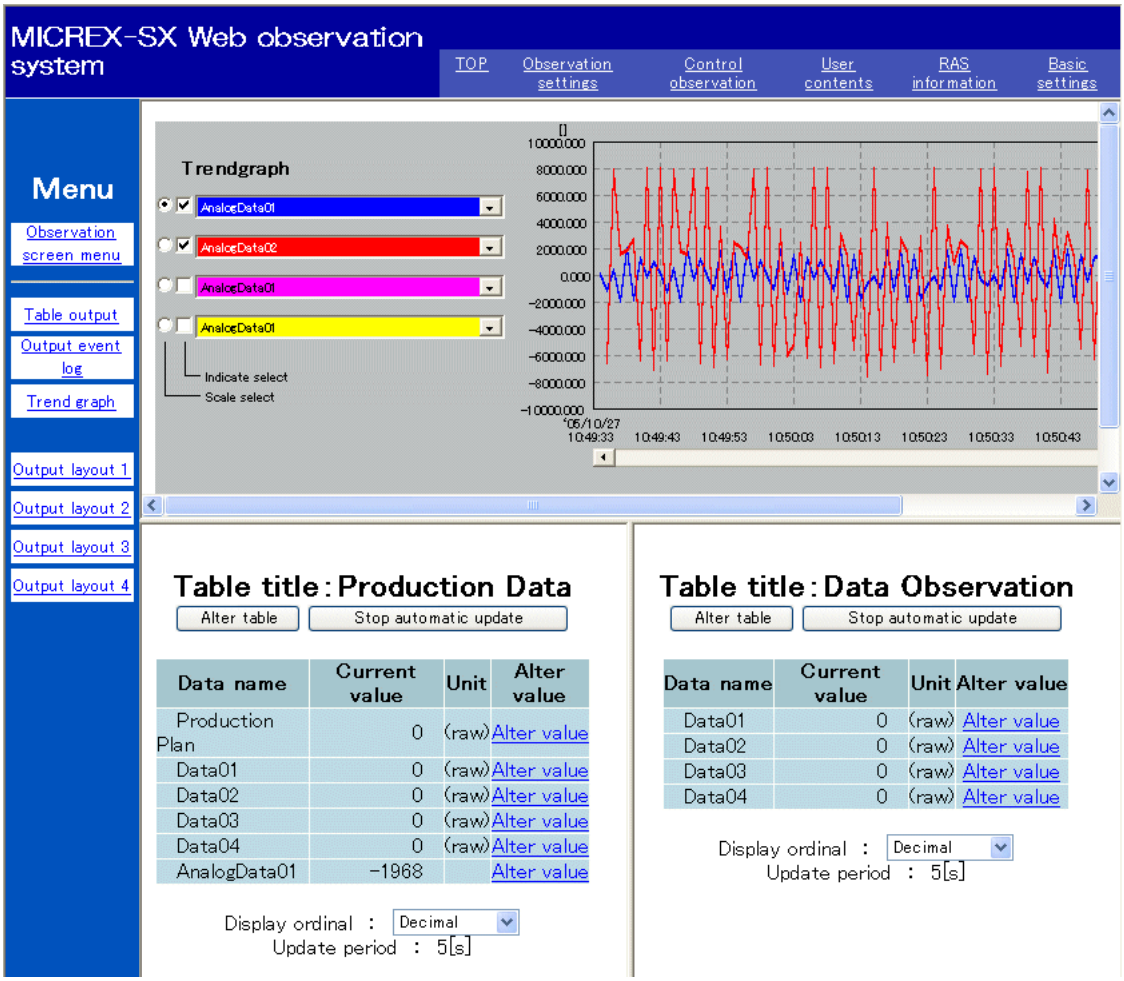


Section 5 WEB Module Operation

5-1 Data Observation on Standard WEB Observation Page

(4) Layout output 4

One trend graph and two tables are displayed.
* Partition lines between contents can be moved by dragging them.



Section 5 WEB Module Operation

5-2 Generating an Alarm and Sending Data by E-mail

The following two e-mail sending functions are provided.

- State changes in data in the SPH_CPU are notified by e-mail.
- Data in the SPH_CPU is sent by e-mail at a specified timing (event). The data in the SPH-CPU is sent as an e-mail attachment.

5-2-1 Sending mails informing state change of SPH_CPU

Procedure for sending mails informing state changes

1) Registration of a mail server ⇨ Set the “Mail server setup” in the “Basic setup”.
2) Registration of destination of the mail ⇨ Perform the “Mail address settings” in the “Observation settings”.
3) Change-state mail settings ⇨ Perform the “Change-state settings” in the “Observation settings”.

(1) Registration of a mail server

1) Prepare a mail server that receives mails from the WEB module. When the WEB module is connected to the intranet, use a mail server on the intranet. When the WEB module is connected to the Internet, use a mail server that is provided by a provider.
2) Register the prepared mail server to the WEB module in the “Mail server setup” in the “Basic setup” from a browser.

⇨ For the setting procedure, refer to “4-2-7 Mail server setup”.

(2) Registration of destination of the mail

In the WEB module, mail address groups (max. 16 groups) and up to 16 mail addresses per group can be registered.

⇨ For the setting procedure, refer to “4-3-5 Mail address settings”.

(3) Change-state mail settings

1) Perform event setting in the “Change-state settings” of the “Observation settings”. To designate the set events as conditions for e-mail send, set the “Enable mail sending” checkbox to ON on the setting page.

Target data name: AnalogData01

Event setting	
H h limit value (floating point format) 100 Hysteresis value(floating point format) 1	Event name Generation: H h limit alarm Recovery: H h limit recovery (up to 20 half-width characters) ☐ Enable event log ☑ Enable mail sending Controller data write setting Select data name : ---- Raw data Write value :

2) On the “Change-state mail settings” box on the “Change-state detection settings” page, set a destination mail group, mail text, and data appended to the text.

Change-state mail settings				
Select mail destination address group	System Maintenance Group		----	
	----		----	
Text (up to 60 half-width characters)	Hydraulic pressure observation error Level1			
Select data name to be written in mail text (Data will be added to mail when a state-change occurs.)	AnalogData01	Industry value	----	Raw data
	----	Raw data	----	Raw data
	----	Raw data	----	Raw data

Send Retry

Section 5 WEB Module Operation

5-2 Generating an Alarm and Sending Data by E-mail

5-2-2 Sending data in SPH_CPU as an e-mail attachment

Procedure for sending data in the SPH_CPU as an e-mail attachment
1) Registration of a mail server ⇨ Set the “Mail server setup” in the “Basic setup”.
2) Registration of destination of the mail ⇨ Perform the “Mail address settings” in the “Observation settings”.
3) Setting data in SPH_CPU to be transmitted ⇨ Perform the “Controller memory transmission settings” in the “Observation settings”.

(1) Registration of a mail server

1) Prepare a mail server that receives mails from the WEB module. When the WEB module is connected to the intranet, use a mail server on the intranet. When the WEB module is connected to the Internet, use a mail server that is provided by a provider.
2) Register the prepared mail server to the WEB module in the “Mail server setup” in the “Basic setup” from a browser.

⇨ For the setting procedure, refer to “4-2-7 Mail server setup”.

(2) Registration of destination of the mail

In the WEB module, mail address groups (max. 16 groups) and up to 16 mail addresses per group can be registered.

⇨ For the setting procedure, refer to “4-3-5 Mail address settings”.

(3) Change-state mail settings

1) Select data to be transmitted in the “Controller memory transmission settings” of the “Observation settings”.

Transmitted controller data setting		
CPU SX bus exchange number	254	← Select CPU0.
Memory class	M3	← Select the retain memory.
Word address	0	← Specify address 0.
Size[W] (Maximum 4096 words)	10	← Specify 10 words.

The retain memory %MW3.0 to %MW3.9 are specified.

2) On the “Individual settings for transmission” box, set the “Mail send” checkbox to ON. In addition, set a filename (a name of an attached file), date/time appending, event to be transmitted, mail destination address group, mail subject, and mail text.

Individual settings for transmission		
Transmission system	☐FTP transmission ☑Mail send	
Path name (up to 63 half-width characters, and folder delimiter is ‘¥’)		
Filename (up to 31 half-width characters)	Production_Daily	
Enable date/time appending(※1)	◉ Disabled ○ Enabled	
Event class(※2)	○ Timer event ◉ Controller data event	
Event number(0-31)	3	
Select mail destination address group	System Maintenance Group / No attachments	---- / No attachments
	---- / No attachments	---- / No attachments
Subject (up to 60 half-width characters)	Daily Production	
Text (up to 60 half-width characters)		

Section 5 WEB Module Operation

5-3 FTP Transmission Function

FTP transmission function is used to transmit data in the SPH_CPU to an external FTP server. For the FTP transmission, the following two types of data transmission functions are provided.

- Function of transmitting trend data that is loaded into the WEB module to the FTP server.
- Function of transmitting data in the SPH_CPU to the FTP server.

5-3-1 FTP transmission of trend data

Procedure for FTP transmission of trend data

1) Registration of FTP server ⇨ Perform the “FTP server settings” in the “SX-WEB system settings” of the “Observation settings”.
2) Individual settings for FTP transmission of trend data ⇨ Perform the “Individual settings for FTP transmission” in the “Trend settings” of the “Observation settings”.

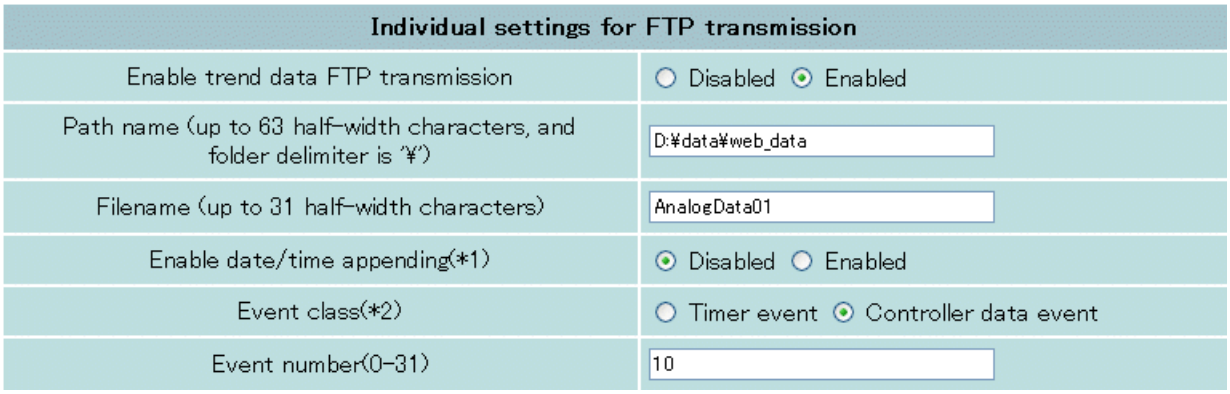
(1) Registration of FTP server

1) Prepare FTP server that receives data from the WEB module. When the WEB module is connected to the intranet, use FTP server on the intranet. When the WEB module is connected to the Internet, use FTP server, etc. that is provided by a provider.
2) Register the prepared FTP server to the WEB module in the “Individual settings for FTP transmission” in the “Trend settings” of the “Observation settings”.

⇨ For the setting procedure, refer to “4-3-8 SX-WEB system settings”.

(2) Individual settings for FTP transmission

1) Select “Enabled” for the “Enable trend data FTP transmission” on the “Individual settings for FTP transmission” box in the “Trend settings” of the “Observation settings”. In addition, set a path name (a file in which data is stored), filename, date/time appending, and event to be transmitted.



Setting item	Description
Enable trend data FTP transmission	If "Enabled" is selected, trend data (data file and status file) is transmitted to the FTP server.
Path name (Note)	For FTP transmission, specify a destination file. Set a relative path name from the route path of the external FTP server. The path name can be up to 63 half-width characters. Use "\" as folder delimiters.
Filename (Note)	Set a filename used in the destination external FTP server within 31 half-width characters long. No extension is required. Trend data file: "Filename.dat", Status file: "Filename.sta"
Enable date/time appending	If "Enable" is selected, date and time data (calendar data of the CPU module) is appended to the filename. For example, when the filename is "ABC" and a date and time is "October 10, 2004 10:32:36," Data file: "ABC20041010_153236.dat" Status file: "ABC20041010_153236.sta"
Event class	Set a timing of data transmission to the FTP server. Choose between the following two transmission types: Timer event: Data is periodically transmitted by the timer. Controller event: Data is transmitted when its state changes. The settings for data actually used as the timer and trigger are performed on the "SX-WEB system settings" page described later. Up to 32 event flags can be set. What number event flag is used is specified here.
Event number	

Note: The following characters are not available: , $ & % ” ’

Section 5 WEB Module Operation

5-3 FTP Transmission Function

5-3-2 FTP transmission of data in SPH_CPU

Procedure for FTP transmission of data in the SPH_CPU
1) Registration of FTP server ⇨ Perform the “FTP server settings” of the “SX-WEB system settings” in the “Observation settings”.
2) Transmitted controller data setting ⇨ Perform the “Transmitted controller data setting” in the “Controller memory transmission settings” of the “Observation settings”.

(1) Registration of FTP server

1) Prepare FTP server that receives data from the WEB module. When the WEB module is connected to the intranet, use FTP server on the intranet. When the WEB module is connected to the Internet, use FTP server, etc. that is provided by a provider.
2) Register the prepared FTP server to the WEB module in the “Individual settings for FTP transmission” in the “Trend settings” of the “Observation settings”.

⇨ For the setting procedure, refer to “4-3-8 SX-WEB system settings”.

(2) Controller memory transmission settings

In the “Controller memory transmission settings” of the “Observation settings”, set data in the SPH_CPU to be transmitted to the FTP server, destination folder in the FTP server, filename, and transmission timing (transmission event).

Transmitted controller data setting	
CPU SX bus exchange number	254
Memory class	M3
Word address	0
Size[W] (Maximum 4096 words)	10

Individual settings for transmission		
Transmission system	☑ FTP transmission ☐ Mail send	
Path name (up to 63 half-width characters, and folder delimiter is ‘¥’)	cpu0	
Filename (up to 31 half-width characters)	retain	
Enable date/time appending(※1)	◉ Disabled ○ Enabled	
Event class(※2)	○ Timer event ◉ Controller data event	
Event number(0-31)	0	
Select mail destination address group	---- / No attachments	---- / No attachments
	---- / No attachments	---- / No attachments
Subject (up to 60 half-width characters)		
Text (up to 60 half-width characters)		

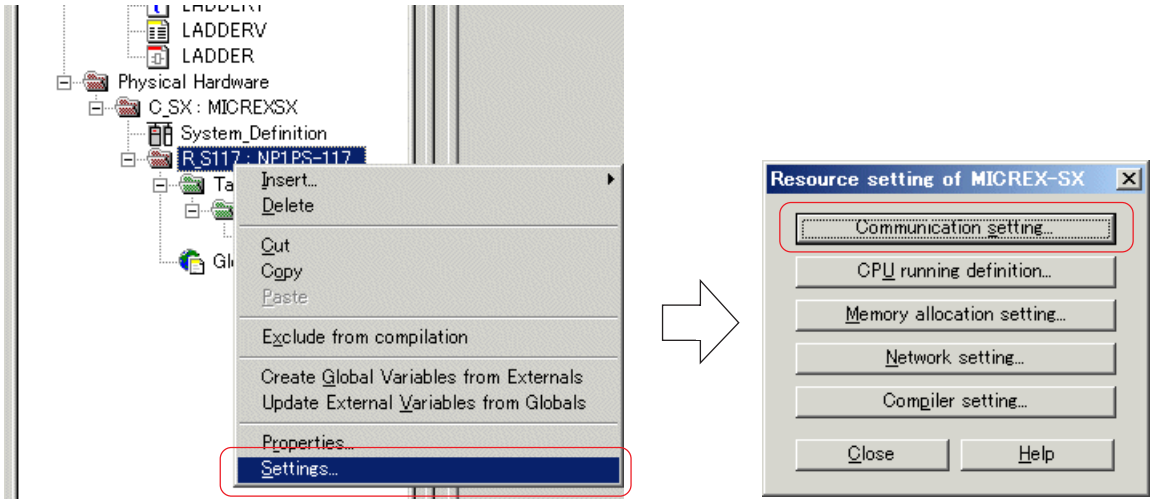
Section 5 WEB Module Operation

5-4 Remote Loader Function

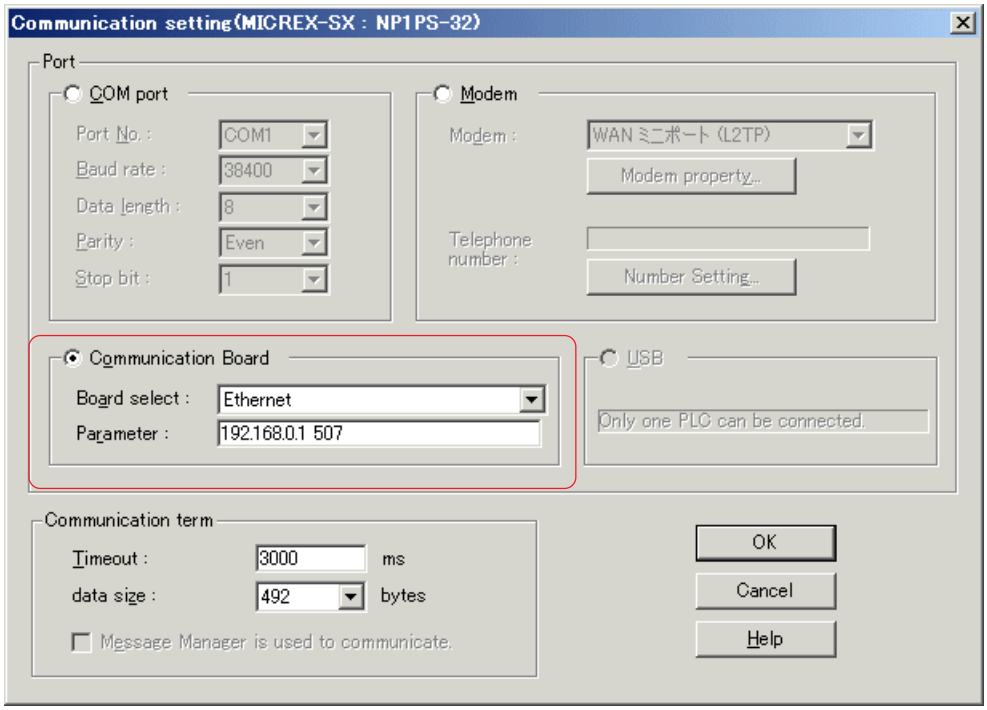
D300win can be connected to the SPH_CPU via the Internet or intranet from remote locations.
Up to four D300win loaders can be connected to one WEB module.
You can use the same loader functions that are available when the loader is directly connected to the loader connector of the CPU module.

5-4-1 Setting D300win

◆ Start up D300win and open a project that is stored in the connected SPH_CPU.
Then, right-click the resource icon in the project tree and execute the [Setting...] command. The “Resource setting of MICREX-SX” dialog is displayed.



◆ Click the [Communication setting...] button on the [Resource setting of MICREX-SX] dialog to display the [Communication setting] dialog. To connect D300win to the WEB module, set the “Communication Board” button to ON. Then, select the “Ethernet” for the board type and enter “the IP address of the connected WEB module and port number set in the WEB module” in the parameter field.



* Between the IP address of the connected WEB module and port number set in the WEB module, enter a space.

◆ Click the [OK] button to complete the setting.

Section 6 Troubleshooting

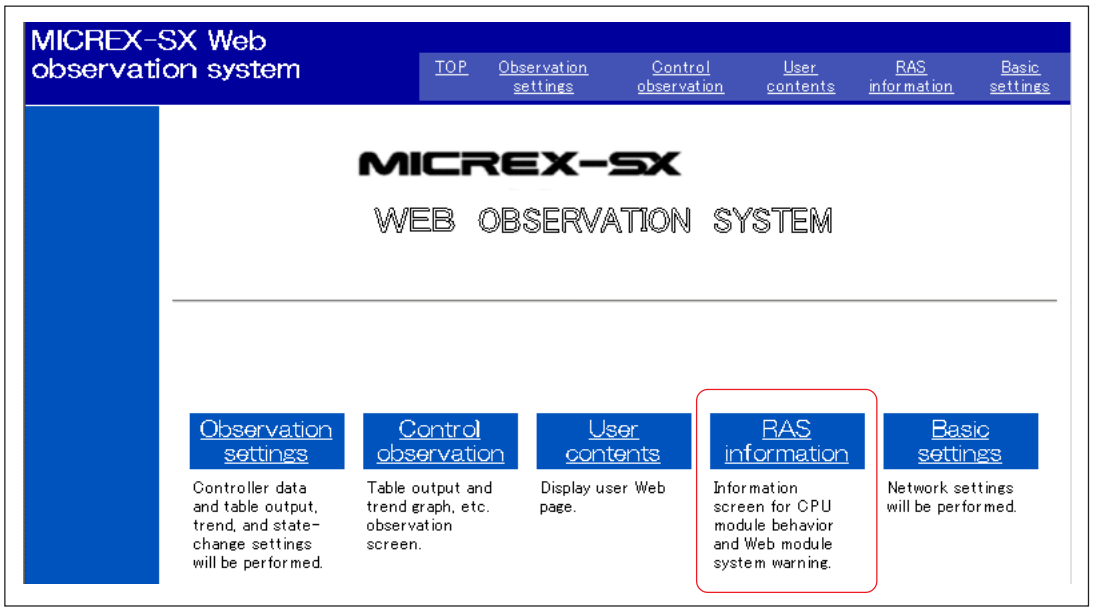
The troubleshooting and failure diagnostic functions that can be used from remote locations via the Internet or intranet are as follows:

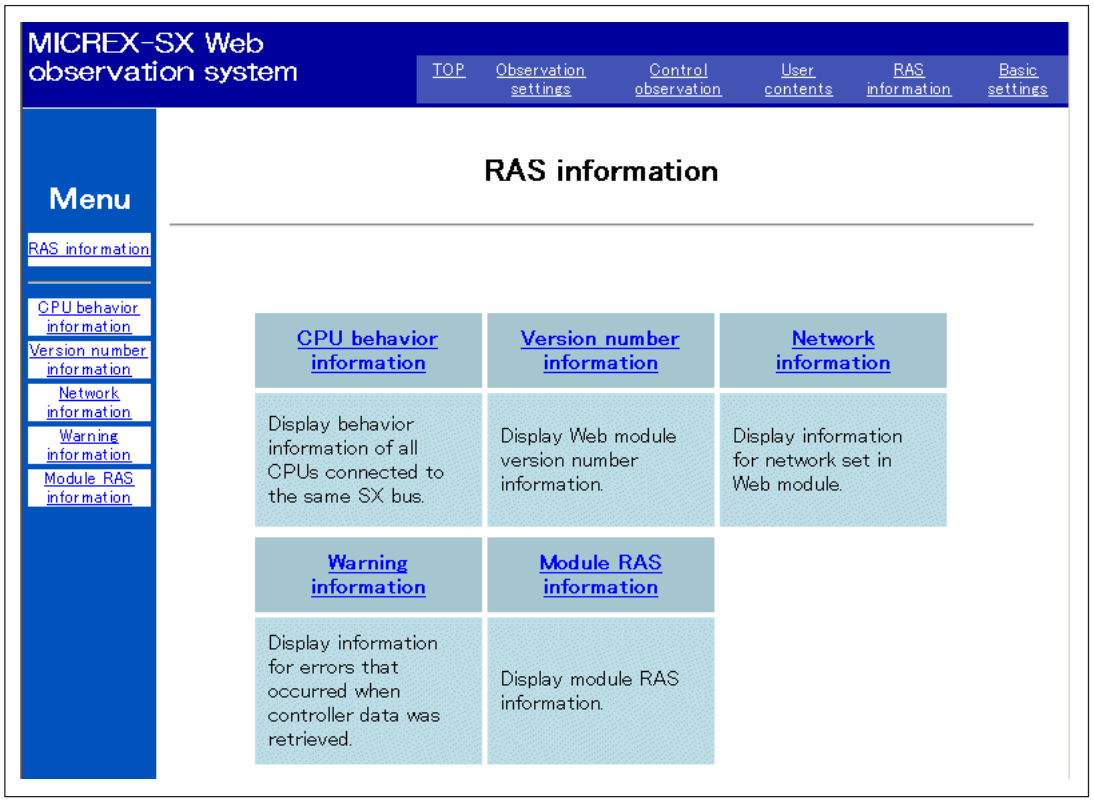
- Monitoring RAS information on the standard observation screen of the WEB module.
- Diagnosing problems with the failure diagnostic function of D300win (connect D300win to the loader connector of SPH_CPU.)

6-1 Diagnosis on Standard Observation Screen

With the “RAS information” provided on the standard observation screen of the WEB module, information about the SPH system and the WEB module can be monitored.

◆ Click the [RAS information] on the top page of the WEB observation system to display the [RAS information] screen.

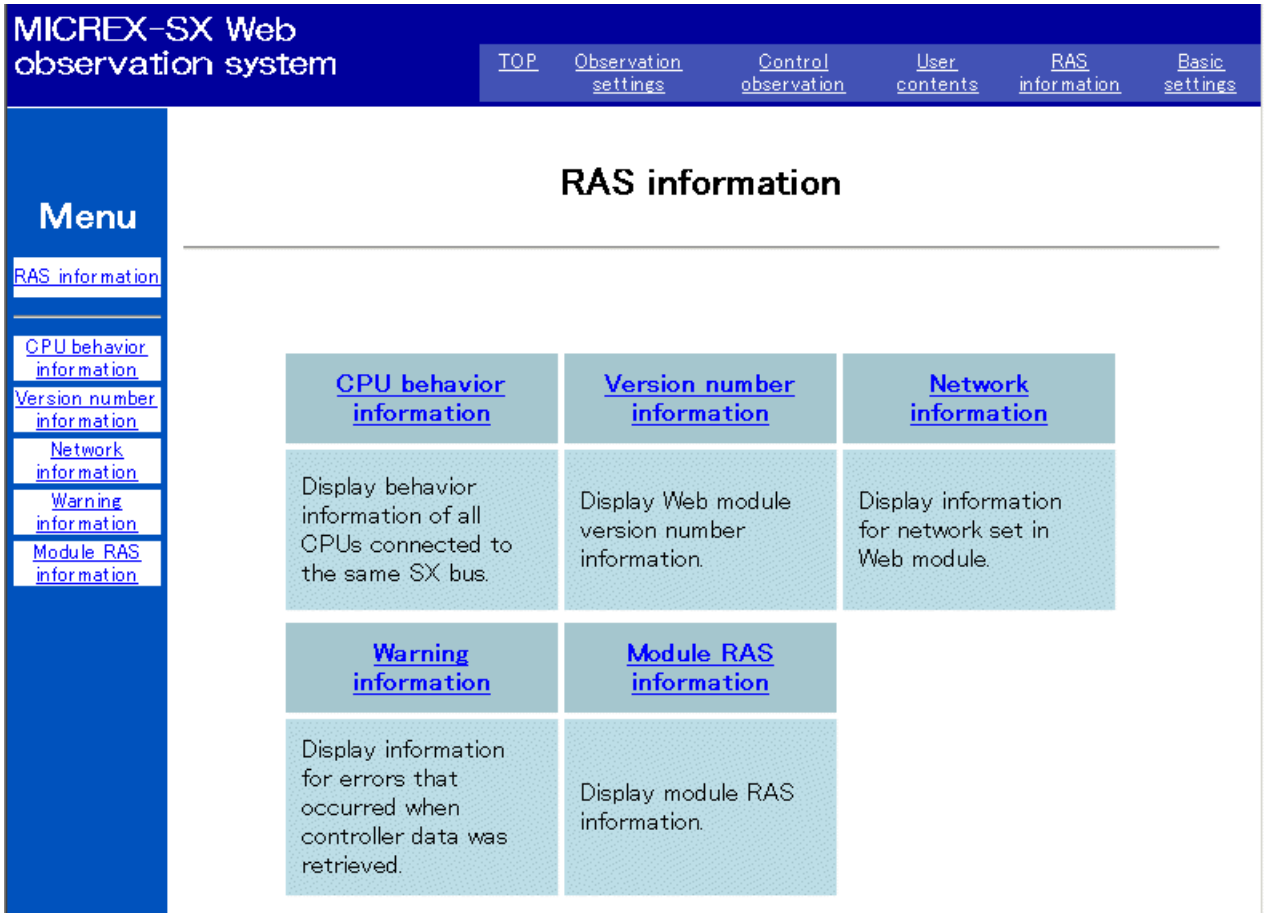




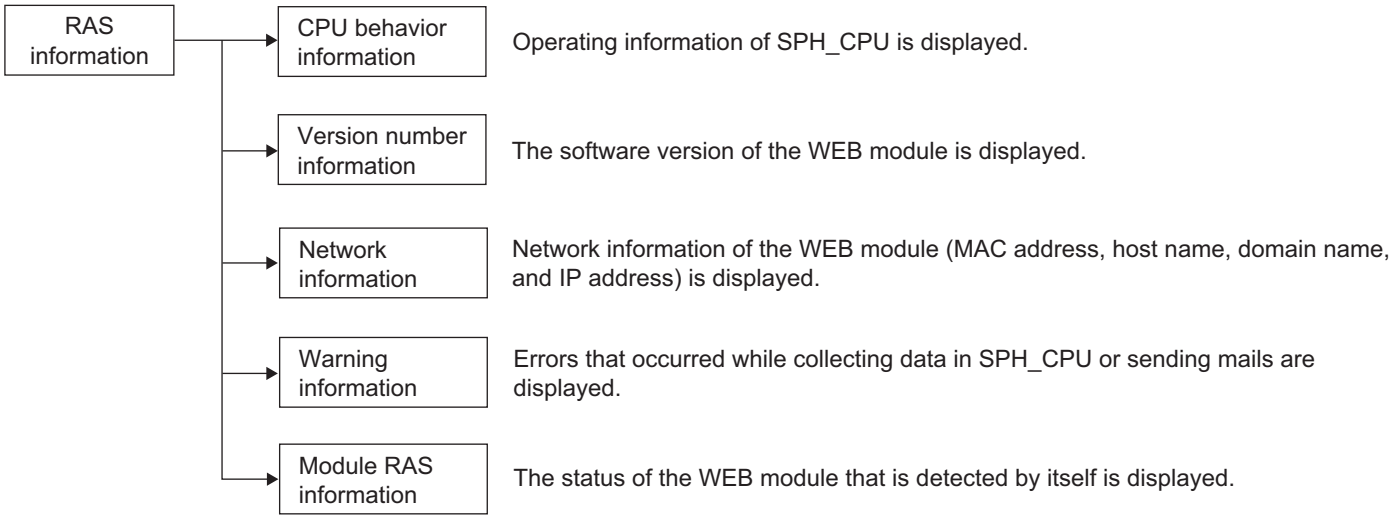
Section 6 Troubleshooting

6-1 Diagnosis on Standard Observation Screen

<Structure of RAS information screen>



The structure of the RAS information page is as follows:


RAS information
CPU behavior information
Operating information of SPH_CPU is displayed.
Version number information
The software version of the WEB module is displayed.
Network information
Network information of the WEB module (MAC address, host name, domain name, and IP address) is displayed.
Warning information
Errors that occurred while collecting data in SPH_CPU or sending mails are displayed.
Module RAS information
The status of the WEB module that is detected by itself is displayed.

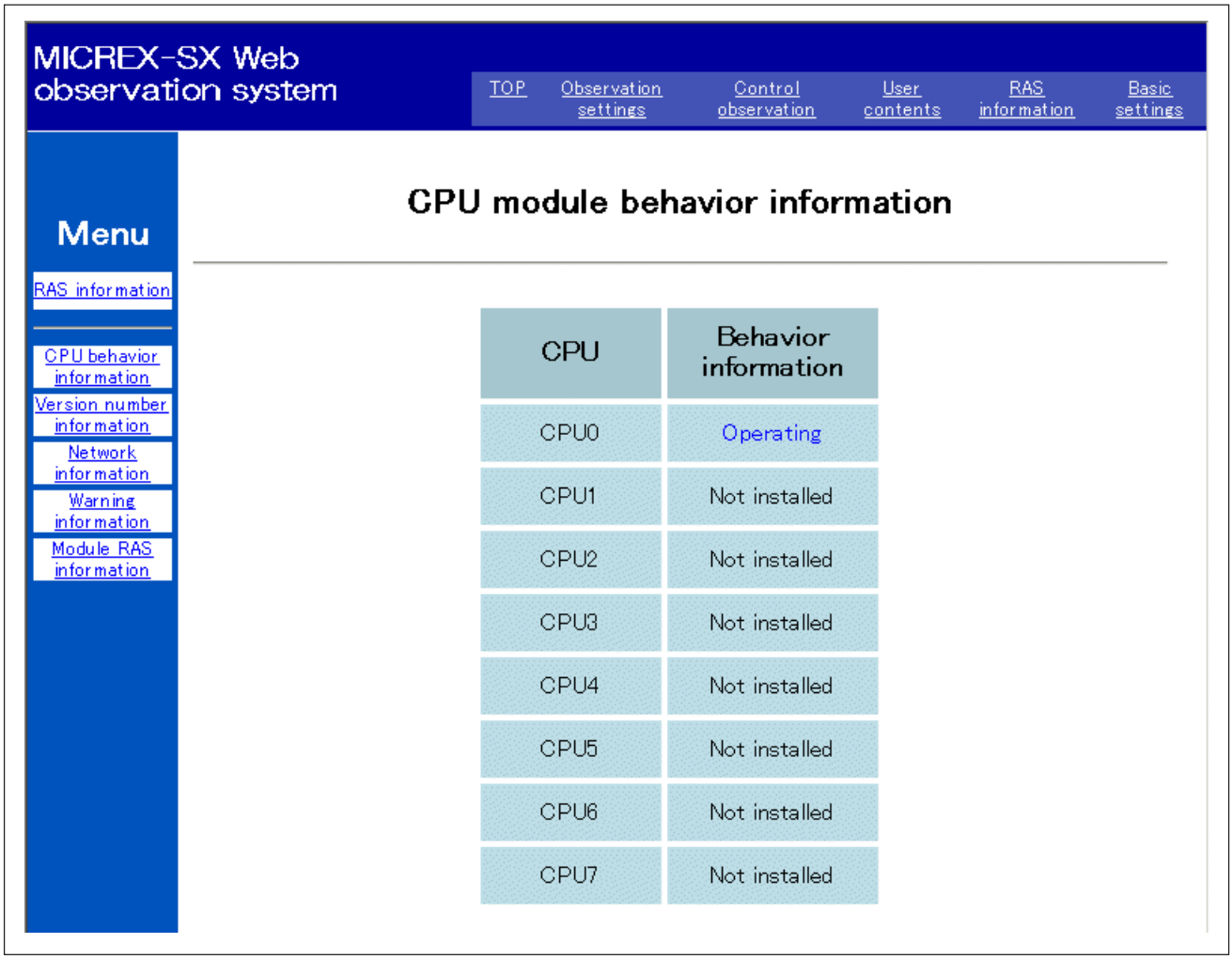
Section 6 Troubleshooting

6-1 Diagnosis on Standard Observation Screen

6-1-1 CPU module behavior information

The operating statuses of the CPUs in the SPH system to which the WEB module is connected is displayed. (Operating, Suspending, Serious error or Not installed).

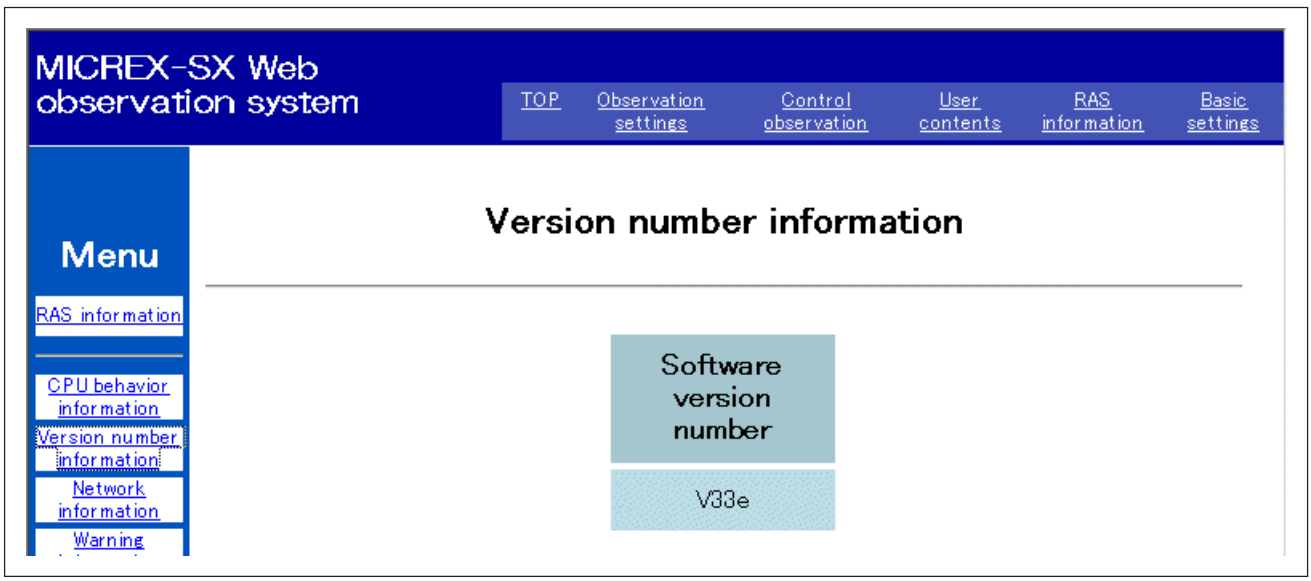
◆ Click the [CPU behavior information] on the [RAS information] screen to display the [CPU module behavior information] page.



6-1-2 Version number information

The software version of the WEB module is displayed.

◆ Click the [Version number information] on the [RAS information] screen to display the [Version number information] screen.



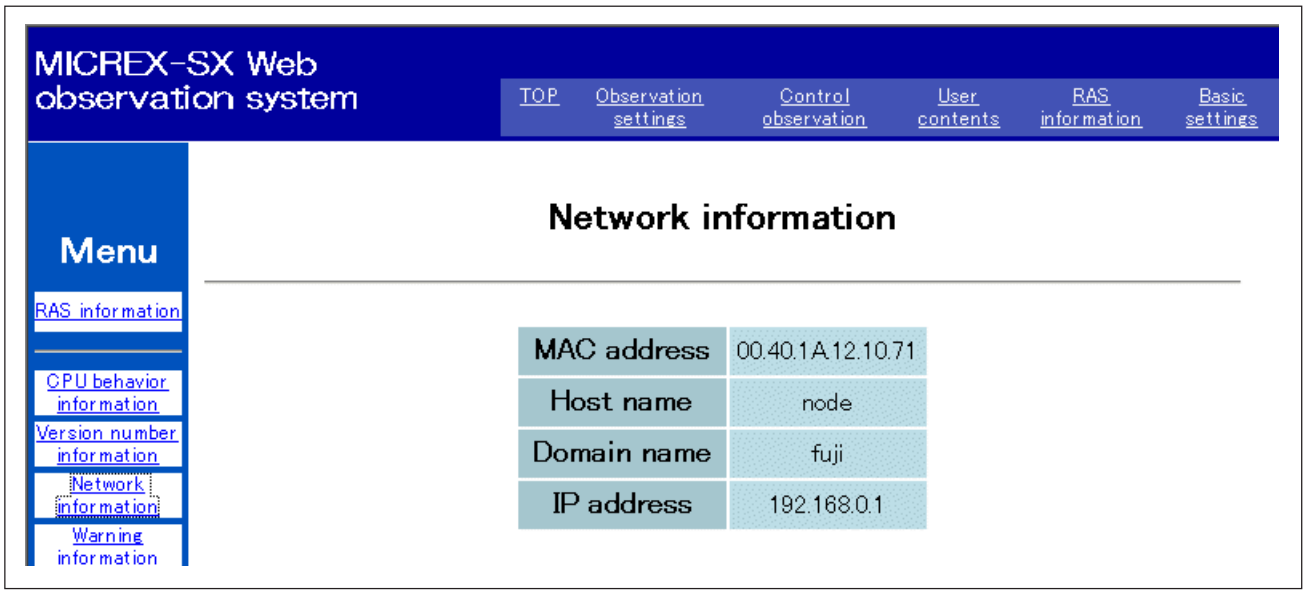
Section 6 Troubleshooting

6-1 Diagnosis on Standard Observation Screen

6-1-3 Network information

The “MAC address”, “host name”, “domain name” and “IP address” are displayed.

◆ Click the [Network information] on the [RAS information] screen to display the [Network information] screen.



Section 6 Troubleshooting

6-1 Diagnosis on Standard Observation Screen

6-1-4 Warning information

Errors that occurred while collecting controller data or sending mails and have been detected by the WEB module are displayed.

◆ Click the [Warning information] on the [RAS information] screen to display the [Warning information] screen.

<Warning messages>

Message	Cause
Could not send state-change mail; send queue is full.	Displayed when too many mail send requests have occurred in a short time, therefore, it becomes impossible to join the queue for mails waiting to be transmitted (waiting buffer). The queue holds up to 100 mail send requests. If the queue is full, requests that cannot join the queue are abandoned.
Could not perform state-change write of controller data; request queue is full.	Displayed when too many controller data write requests have occurred in a short time during state change, therefore, it becomes impossible to join the queue. The queue holds up to 100 write requests. If the queue is full, requests that cannot join the queue are abandoned.
Failed to send mail.	Displayed when mails cannot be sent due to mail server down or a mail setting error.
Read failed. Controller data name: ***	Displayed when periodic reading of controller data has failed. If it has successively failed, this message is not displayed. This error is caused by disconnection of the destination CPU or a controller data setting error.
Write failed. Controller data name: ***	Displayed when a write request has occurred from table output, etc. This error is caused by disconnection of the destination CPU or a controller data setting error.
Fixed period retrieval of controller data, set with **ms period, failed.	Displayed when another retrieval period begins before data rettrieval at the previous period has not ended yet. This can be displayed when the load of the CPU has been increased.
An event fired but could not execute because the previous event has not terminated.	Displayed when the next timer event occurs before the previous timer event has not ended yet.
FTP transmission could not be performed; FTP transmission requests are full.	Displayed when too many FTP transmission requests have ocurred in a short time, therefore, it becomes impossible to join the queue. The queue holds up to 40 FTP transmission requests.
FTP server connection error Untransmitted filename: ***	Displayed when it is impossible to connect to the FTP server. This error is caused by an FTP server setting error.
FTP server login error Untransmitted filename: ***	Displayed when logging into the FTP server has failed. The login name or password set on the FTP server setup page is not correct.
FTP server file write error Untransmitted filename: ***	Displayed when a response from the FTP server is erroneous while writing data to the FTP server.
Cannot create FTP server directory Untransmitted filename: ***	Displayed when a directory for the FTP server cannot be created.

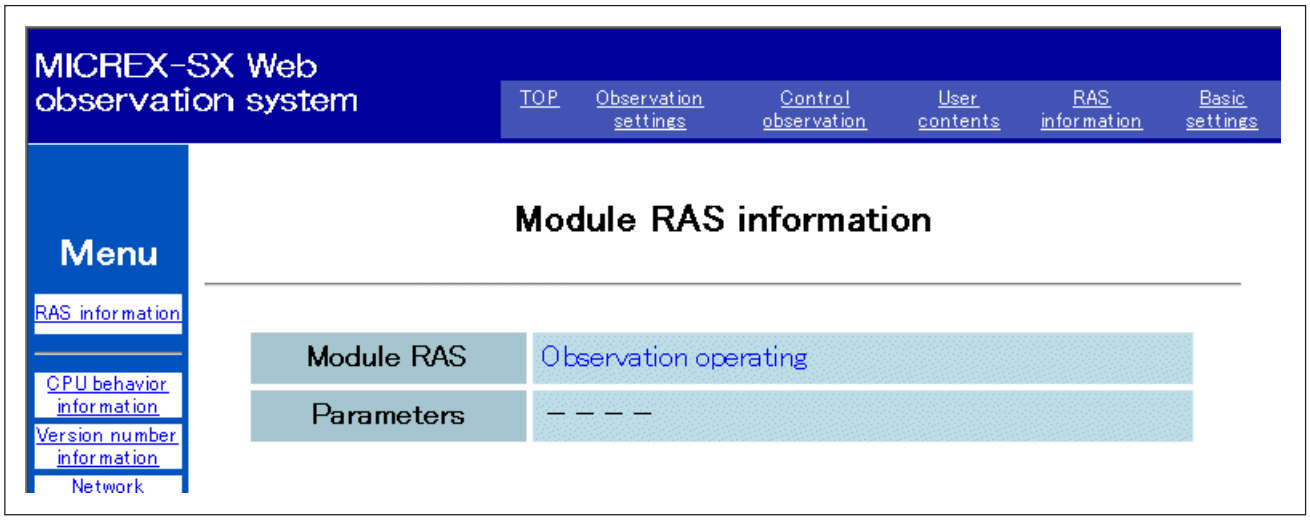
Section 6 Troubleshooting

6-1 Diagnosis on Standard Observation Screen

6-1-5 Module RAS information

The status of the WEB module detected by itself is displayed.

◆ Click the [Module RAS information] on the [RAS information] screen to display the [Module RAS information] screen.



<Module RAS information>

Message	Cause
Initializing	After the SX bus is initialized, "Initializing" is displayed until the WEB module reads the calendar data and configuration information from the SPH_CPU.
Observation operating	"Observation operating" is displayed when the SPH system is normally operating.
Serious error	"Serious error" is displayed when the SPH_CPU cannot continue its operation by a cause other than the WEB module.

Section 6 Troubleshooting

6-2 Failure Diagnosis with D300win

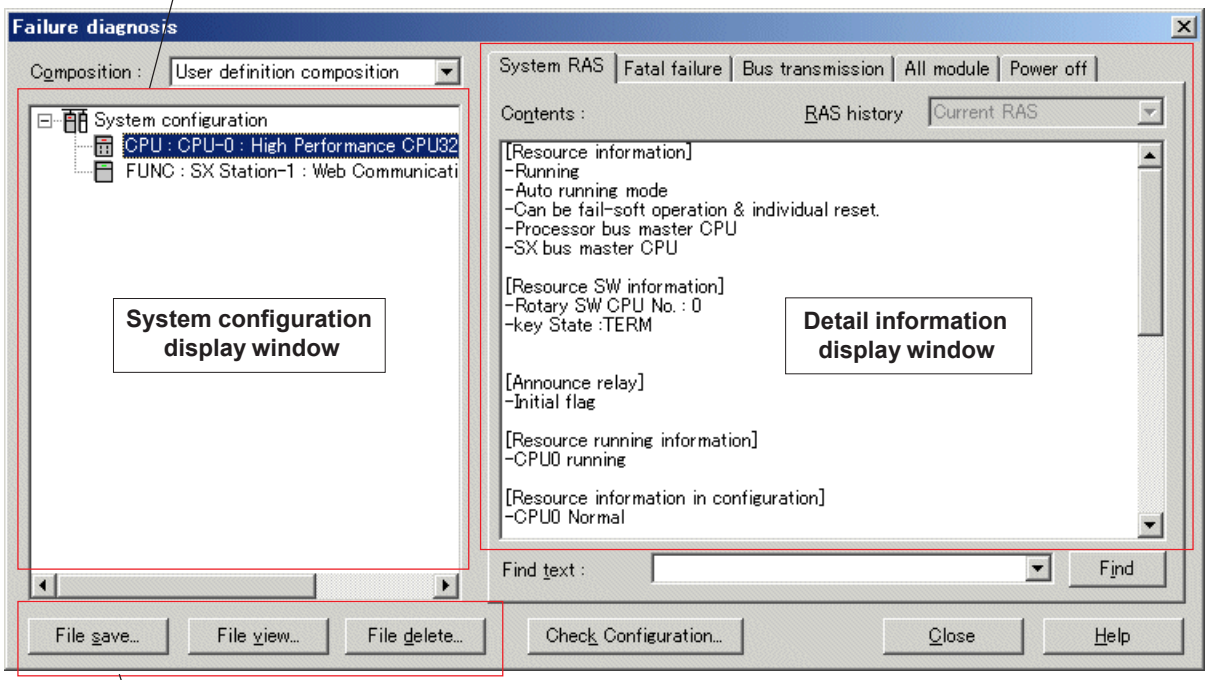
The status of the WEB module can be diagnosed with the failure diagnostic function of D300win.

6-2-1 Procedure for diagnosis

◆ Connect D300win to the CPU and click the [Failure diagnosis...] button on the [Project Control] dialog. The [Failure diagnosis] dialog is displayed.

The CPU internal system memory data is read out to display module configuration and status. When a module is selected from those displayed in the system configuration display window, detail information of the module is displayed on the detail information display window at right. Detail information of the WEB module is analyzed using the detail information window at right.

Detail information window can be changed over by clicking the corresponding tab.
⇨ For the ontents of each screen, see the following pages.

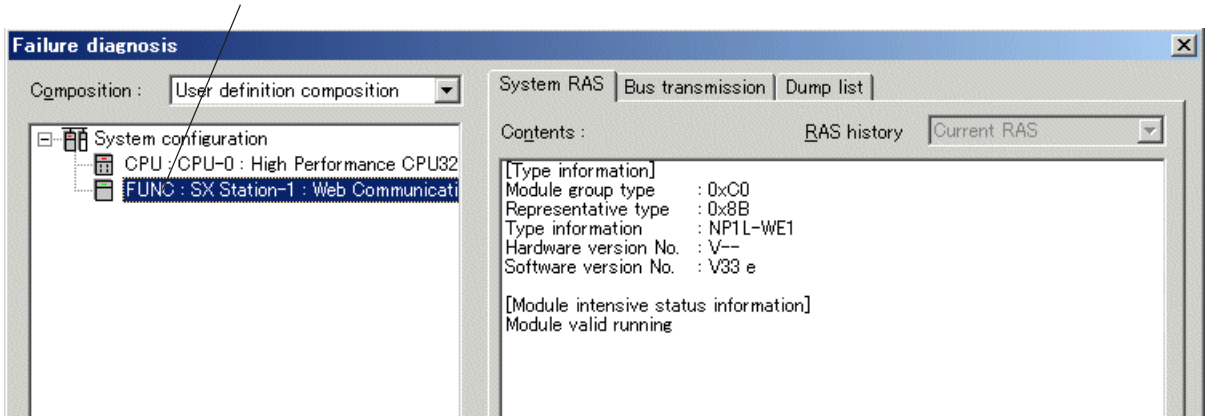


Used to save the content of fault diagnosis in a text file. Because of text format, the data can be checked with commercially available text editor.

◆ When the WEB module is selected on the system configuration display window, the following three pieces of information are displayed on the detail information display window. The detail information windows can be changed over by clicking the corresponding tab.

- System RAS ⇨ Module type information, version No. and intensive status information (outline information) are displayed.
- Bus transmission information ⇨ Transmission information of the SX bus is displayed.
- Dump list ⇨ Detail RAS information stored in the WEB module is displayed.

Click here.

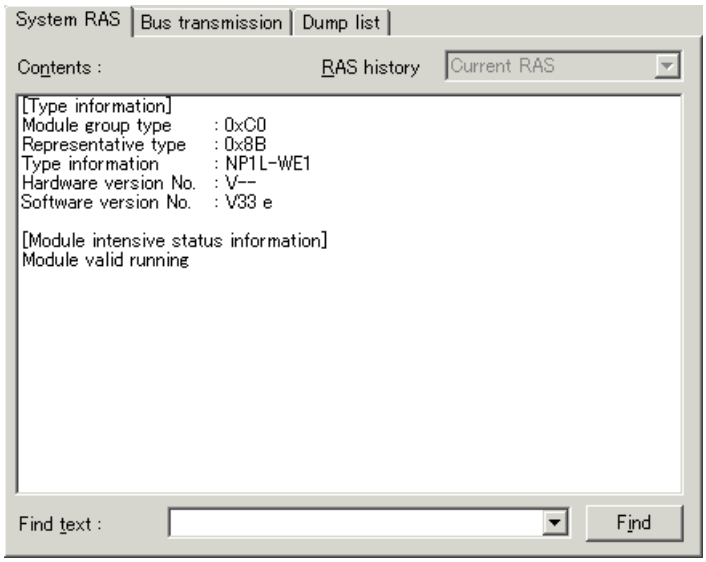


Section 6 Troubleshooting

6-2 Failure Diagnosis with D300win

6-2-2 System RAS

On the system RAS window, “Type information” and “Module intensive status information” are displayed.



- **Type information**
  The module type and version No. are displayed.
- **Module intensive status information**
  A summary of the module’s status is displayed.

<Module intensive status information>

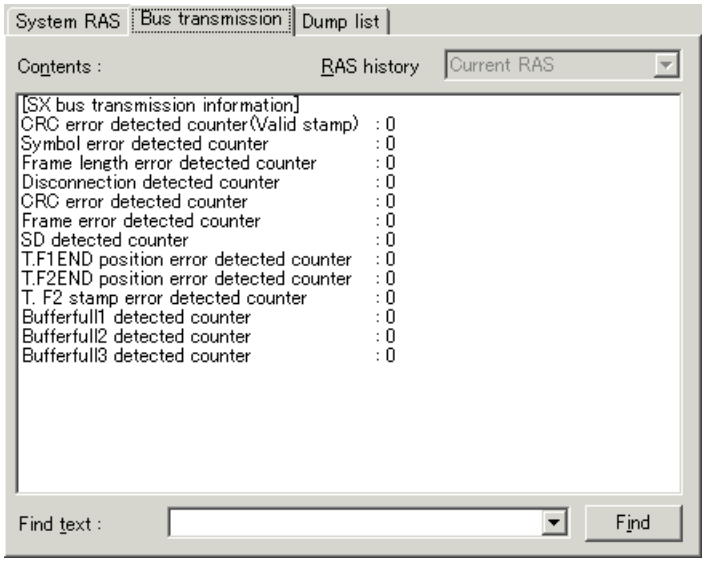
Classification	Displayed message	Description
Normal	Module running normally	Initialization is completed and module is running normally.
Fatal fault	Module fatal fault: WDT up fault	Hardware fault; module needs to be replaced.
	Module fatal fault: CPU fault	Hardware fault; module needs to be replaced.
	Module fatal fault: RAM fault	Hardware fault; module needs to be replaced.
	Module fatal fault: SX bus fault	Hardware fault; module needs to be replaced.

Section 6 Troubleshooting

6-2 Failure Diagnosis with D300win

6-2-3 Bus transmission information

If noise interferes with the SX bus transmission line or if the wiring of SX bus is defective, various errors that are related to SX bus transmission are counted. When such error counter works, it means that the environment of the SX bus system is problematic with respect to noise. And some measure needs to be taken.


System RAS
Bus transmission
Dump list
Contents :
RAS history
Current RAS
[SX bus transmission information]
CRC error detected counter(Valid stamp) : 0
Symbol error detected counter : 0
Frame length error detected counter : 0
Disconnection detected counter : 0
CRC error detected counter : 0
Frame error detected counter : 0
SD detected counter : 0
T.F1END position error detected counter : 0
T.F2END position error detected counter : 0
T. F2 stamp error detected counter : 0
Bufferfull1 detected counter : 0
Bufferfull2 detected counter : 0
Bufferfull3 detected counter : 0
Find text :
Find

<SX bus transmission information>

SX bus transmission status	Descriotion
CRC error detected counter (Valid stamp)	Counted up if CRC error is detected but stamp is valid.
Symbol error detected counter	Counted up if symbol error is detected.
Frame length error detected counter	Counted up if frame length error is detected.
Disconnection detected counter	Counted up if disconnection is detected (if transmission is stopped for 130 ms or longer time.)
CRC error detected counter	Counted up if CRC error is detected.
Frame error detected counter	Counted up if frame receiving is stopped in the middle of frame receiving operation.
SD detected counter	Counted up if SD (the code indicating the top of a frame) is received in the middle of frame receiving operation.
TF1 END position error detected counter	Counted up if END is not at specified position during the 1st cycle of total frame receiving.
TF2 END position error detected counter	Counted up if END is not at specified position during the 2nd cycle of total frame receiving.
TF2 stamp error detected counter	Counted up if error is found in a received frame during the 2nd cycle of total frame receiving.
Buffer full 1 detected counter	Counted up if buffer full is detected in the middle of total frame receiving or multicast frame receiving.
Buffer full 2 detected counter	Counted up if buffer full is detected in the middle of message, ACK or NAK receiving.
Buffer full 3 detected counter	Counted up if buffer full is detected in the middle of token frame receiving.

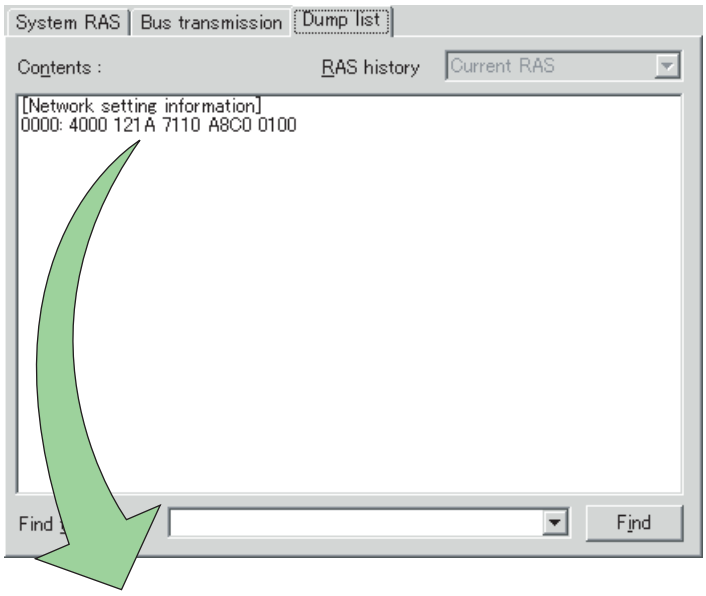
Section 6 Troubleshooting

6-2 Failure Diagnosis with D300win

6-2-4 Dump list

On the dump list of the WEB module, the following information is stored.

- Network setting information (MAC address and IP address of the WEB module.)



0000:4000 101A 1651 A8C0 0100

MAC address IP address

The example above represents MAC address and IP address as follows:

MAC address: 4000 101A 1651

00. 40. 1A. 10. 51. 16

IP address: A8C0 0100

C0. A8. 00. 01 ⇨ 192. 168. 0. 1

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Information in this manual is subject to change without notice.